

## Aspect vs. relative tense, and the typological classification of the Ancient Egyptian *sḏm.n(=f)*

Daniel A. Werning, Berlin

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- Summary

Recently, Egyptology has again become interested in the question of tense and aspect in the Egyptian verbal system. Some of the latest works of Jean Winand – the chapter *Les fondements théoriques de linguistique* in the *Grammaire raisonnée de l'égyptien classique* (Malaise & Winand) and *Temps et aspect* (Winand) – have introduced a powerful *instrumentarium* into Egyptology to speak about that question: the Vendler School's conception of *Aktionsart* and the Klein School's conception of phasal aspect.<sup>1</sup> It is my belief that one has to define the concepts and the subdivisions one is working with precisely – e.g. one's concept of aspect and the labels for different aspects one distinguishes. Winand does this in an exemplary way. In the following article, I wish to enhance his analytical framework by introducing the ideas of Jürgen Bohnemeyer and Annerieke Boland, who specified the definition of the time frame that Winand calls *moment de référence* as the time frame being talked about (*topic time, Betrachtzeit*).<sup>2</sup> This makes it possible to distinguish between Winand's *moment de référence (topic time)* and his *point de repère (reference time)*, and thus between phasal aspect and relative tense. This distinction triggers a reanalysis of Winand's analysis of the *sḏm.n(=f)*. I am going to argue that within this more precise framework the *sḏm.n(=f)* shall be analyzed as exhibiting perfective<sup>3</sup> phasal aspect and anterior tense, i.e. as a grammatical form that is commonly called *Anterior* in typological discussion. Using different terminology, this has been argued by other scholars before. I am going to sum up and explain how this analysis can indeed semantically as well as typologically account for all its uses – including the performative use, the

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1 Malaise & Winand (1999: ch. 20), Winand (2006; reviews: Stauder-Porchet 2007, Uljas 2007b). For the Vendler School of *Aktionsart* see: Olsen (1997: ch. 5.1). Klein (1994).

2 Bohnemeyer (2003); Boland (2006).

3 Note that this is the Comrie School's understanding of 'perfective' (Comrie 1976). Other definitions are discussed in this article below.

negated use, and the semantic peculiarities that it exhibits in connection with roots of quality lexemes.

Finally, I am going to propose a hypothesis that the predicative *sdm.n(=f)* form had been developing along the line of Resultatives → Anteriors → Pasts/Perfectives as cross-linguistically observed by Joan Bybee et al.<sup>4</sup> Comparison with grammatical forms in other languages triggers the old idea that the *sdm.n(=f)* form is a grammaticalized combination of a stative, passive form plus a possessive element, commonly called ‘Perfect.’ These two elements, I suggest, are to be identified as the ‘possessive’ preposition *n* ‘for/to (s.o.)’ and the Pseudoparticiple/Stative/*Parfait Ancien*.

## 1 The problem: ‘perfective,’ ‘accompli,’ ‘perfect,’ ‘anterior,’ and ‘past’

The predicative *sdm.n(=f)* has been labeled and/or glossed ‘perfective,’ ‘accompli,’ ‘perfect / (präsentisches) Perfekt,’ or ‘Präteritum.’ Is this merely a question of terminology or is terminology actually reflecting different conceptions about that important verb form of Earlier Ancient Egyptian? Both are partly true and several layers are involved.

Firstly, it is important to differentiate between labels for morpho-syntactic forms (grams) – be they single synthetic forms or grammatical constructions – and labels for the descriptions of semantic concepts. Naturally, there is a considerable overlap between the two labeling systems. We are used to picking labels for grammatical tenses that reflect one of the kernel semantic properties typically expressed by the form. I think that it is worth disputing about labels, since proper labels reduce the danger that readers outside the field of Egyptology misinterpret Ancient Egyptian examples. In this article, I will use capitals to mark the labels for grams to differentiate them from labels for semantic concepts.

Apart from terminological issues, there is the linguistically substantial question as to whether the grammatical tense *sdm.n(=f)* is marked for aspect, for tense, or for both. While some scholars claim that the *sdm.n(=f)* form carries aspectual meaning and that temporal meaning is only inferred or secondary (‘perfective,’ ‘accompli’), others see temporal meaning as the predominant or only feature (‘past,’ ‘Präteritum’).<sup>5</sup> The label ‘perfect’ is notoriously vague in this respect, being used as a label for an aspect by some linguists, but as a label for specific aspectual and temporally marked grammatical forms by others.<sup>6</sup> Until now the labeling of grams in Egyptology does

4 Bybee et al. (1994: ch. 3).

5 Pro ‘aspect’ (and tense): Junge (1970); Hannig (1984, 1991); Vernus (1984: 161); Winand (2006). Pro tense and neutral aspect: Loprieno (1986: 31, 54, 88-89 [‘Präteritum’]). Pro tense and/or ‘aspect’: Eyre (1989: 63-65). For a development of ‘present perfect’ to ‘perfective past’: Satzinger (1987); Loprieno (1995: 77-81 with fn. 126); Ritter (1995: 137-141). For these and other earlier conceptions compare: Hannig (1987), Ritter (1995: ch. 3.1). (Note that some call ‘aspect’ what is going to be called relative tense in this article; see below.)

6 Pro ‘Perfect’: e.g. Schenkel (2005); Allen (1984: §704; 2000: 225, 263 ‘tenseless’). In favor of a development out of an earlier ‘perfect’: compare fn. 5. ‘Perfect’ as what is going to be called ‘resultative’ in this article: e.g. Klein (1994: 108), Boland (2006: 48-49); ‘Perfects’ as a distinct category of grams: Klein (1994: ch. 6.5.2), Dahl (1985: ch. 5); ‘Perfect’ as synonym for Anterior

not reflect the difference between aspect and relative tense on the one hand, and between relative and absolute tense on the other hand, authors using e.g. the labels ‘perfect aspect’ or ‘Präteritum’ alongside a description of anterior meaning.<sup>7</sup>

Another source for possible misunderstandings arises through the existence of different concepts about what ‘aspect’ is. Within Egyptology, there are at least five main linguistic ‘schools,’ which I want to call the *Heger/Mugler School of agent aspect*, the *Comrie School of viewpoint aspect*, the *Cohen School of ‘concomitant’ aspect*, the *Binnick School of aspects*, and the *Klein School of phasal aspect*, respectively. Compare the following definitions.

Heger/Mugler School of agent aspect (followed by Rainer Hannig; structure recognized by Thomas Ritter):<sup>8</sup>

Aspekt ist die Opposition von Perfektiv vs. Imperfektiv. Der Perfektiv teilt mit, daß das Agens sich außerhalb (seiner) Handlung befindet. Der Imperfektiv teilt mit, daß das Agens sich innerhalb der Handlung befindet. (Heger 1963, as quoted by Hannig 1982: 44)

*Aspekt* ist eine Zeitbeziehung einer Größe X zu einer Größe Y, die von einem grammatischen Morphem bezeichnet wird, dessen Kontext X und Y identifiziert, nämlich derart, daß X bei Existenz einer entsprechenden Nominalphrase als Lebewesen, Eigenschaft, Ding etc., ansonsten aber als unbestimmte Person (‘man’) erscheint, Y hingegen je nach Kookurrenz mit einem Verballexem, Aspektmorphem oder Satz als Prozeß bzw. Sachverhalt. Es gibt drei verschiedene Arten solcher Zeitbeziehungen, nämlich

- die Eigenschaft von X, nach Y zu sein (‘Nachzeitigkeit’ [...]),
- die Eigenschaft von X, bei einem Y zu sein, dessen Anfang und Ende vor bzw. nach dem Zeitpunkt liegen, zu dem sich X befindet (‘Gleichzeitigkeit’ [...]),
- die Eigenschaft von X, vor Y zu sein (‘Vorzeitigkeit’ [...]).

[...] Bei der ‘Nachzeitigkeit’ handelt es sich um das Perfekt, bei der ‘Gleichzeitigkeit,’ um den imperfektiven Aspekt, bei der ‘Vorzeitigkeit’ um das Futur. (Mugler 1988: 170-171)

Thomas Ritter interprets the latter definition in the following way:

Der Aspekt drückt mit Hilfe morphologischer oder lexikalischer Mittel das zeitliche Verhältnis des Subjekt[s] zum Lexemprozeß aus. (Ritter 1995: 65)

Comrie School of viewpoint aspect (widespread among linguists; followed by Antonio Loprieno; terminology followed by: Thomas Ritter):<sup>9</sup>

Another way of explaining the difference between perfective and imperfective meaning is to say that the perfective looks at the situation from the outside, without necessarily distinguishing any of the internal structure of the situation, whereas the imperfective looks at the situation from the inside, [...].

[...]: perfectivity indicates the view of a situation as a single whole, without distinction of the various separate phases that make up that situation, while the imperfective pays essential attention to the internal structure of the situation. (Comrie 1976: 4, 16)

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grams: Bybee et al. (1994: 61); ‘perfect’ as term for a former Resultative already a good part on its way to an Anterior: Nedjalkov & Comrie (1988: e.g. p. 15, 64-66).

7 E.g. Allen (2000: 225, compare 1991: 24); Ritter (1995: 62 [using ‘anterior’ and ‘posterior’ for inter-clausal temporal relations, see p. 69]).

8 Heger (1963); Mugler (1988: 170-171); Hannig (1982: 44); Ritter (1995: 65). Note that, within their general frameworks, neither Heger nor Mugler generally restricted the identification of the ‘agent’ to the subject of the clause (Heger 1963: ch. I.3; Mugler 1988: 93-95, 170: either process ↔ *subject*, or process/subject ↔ *someone*). But this is of minor importance here, since the receptions of their works within Egyptology did so.

9 Eyre (1989: fn. 5ff); Loprieno (1986: 18-19; 1995: 75-77 with fn. 110-126); Ritter (1995: 66-67).

Cohen School of ‘concomitant’ aspect (structure followed by: Pascal Vernus, Jean Winand).<sup>10</sup>

[...], l’expression de la concomitance constitue par elle-même une mise en relief de certains traits sémiologiques de A [imperfectif, D.W.] et B [perfectif]. Dans A, l’inhérence est souligné par le fait qu’un moment est choisi à l’intérieur du déroulement, ce qui met du même coup le déroulement en relief. Dans B, c’est l’adhérence qui est soulignée par le moment où est prise en considération cette adhérence avec ses effets constatés à ce moment.

[...] la réalisation de  $\beta$  [= concomitance] dans A fonde le système de formes qui peut être défini comme le **progressif**; la réalisation de  $\beta$  dans B fonde le système de formes qui peut être défini comme le **parfait** [...]. (Cohen 1989: 95, 96)

Binnick School of aspects (followed by: Antonio Loprieno, James P. Allen).<sup>11</sup>

It is now possible to distinguish three kinds of ‘aspect’: Aristotelian aspect is the classification of situations for them in terms of phasic structural types; the *Aktionsarten* constitute a classification of expressions for subsituations, phases, and subphases of situations; and true aspect concerns the temporal relationship of a situation to the reference frame against which it is set.

Aspect has to do with the relationship of the event time E to the reference time frame R; complexive (perfective) aspect has E within R, imperfective has E and R overlapping; and perfect has E preceding R. (Binnick 1991: 458)

Klein School of phasal aspect (Annerieke Boland; conception followed by: Jean Winand).<sup>12</sup>

[...] aspects are definable in terms of temporal relations between time spans [...] – the time of the situation and the topic time. The relations themselves are the normal ones, as defined by the Basic Time Concept, for example BEFORE, AFTER, INCL, or combinations of those. In principle, many such combinations could be chosen as aspects, but only some of them seem to be encoded in natural language. [...] we defined four such combinations as aspects: PERFECTIVE, PERFECT, IMPERFECTIVE and PROSPECTIVE. These four are often found encoded in natural languages; but surely this does not exclude other possibilities. (Klein 1994: 119)

I argue that the concepts of the School of Agent Aspect, the Comrie School, the Cohen School, and the Binnick School can all nicely be translated into a framework like that of Winand and others that takes into account both, the Klein School’s phasal aspect as well as the Reichenbach School’s relative tense.

But before going into detail, I briefly have to present the details of this general framework, which is a combination of Winand’s framework and the ideas of Jürgen Bohnemeyer, Annerieke Boland, and Carlotta Smith.

10 Partly with reference to earlier works of Cohen: Vernus (1986: en. 4, 26; 1990: 194); Malaise & Winand (1999: 228); Winand (2006: 182-184).

11 Loprieno (1995: 75-77 with fn. 110-126); Allen (2000: 149-150).

12 Boland (2006: ch. 3); Malaise & Winand (1999: §362, p. 228); Winand (2006: ch. 4 A).



{[<~~~~X>]}	T <sub>0</sub>	'He had written a letter.'
or <~~~~X>{[—]}	T <sub>0</sub>	'Sie hatte ein Haus gebaut.'
{[<~~~~X>]}	T <sub>0</sub>	'A letter was written.'
		'Das Haus ist gebaut worden.'
<~~~~X>{[—]}	T <sub>0</sub>	'A letter had been written.'
		'Das Haus war gebaut.'

One of the most difficult points is the analysis of so-called 'simple tense' grams (Simple Past, Simple Present, ...). In the subsystem of anterior (in the wider sense of the word) grammatical tenses, such forms can imply completeness of the process (perfective aspect); i.e. in combination with the markedness for anterior/past tense the form implies that the end of the process has been reached prior to reference time/time of speech. In other languages such forms can lack that kind of implication, e.g. in German 'Sie lief zur Oma.' Annerieke Boland has suggested that the latter forms should be described to exhibit what she calls *neutral aspect*. She claims that in the case of these forms the listener has to form a hypothesis on the aspect which the speaker could have had in mind. (Note that within the framework of phasal aspect an aspect is *always* needed in order to identify topic time and mediate between tense and the process proper/situation time.) The aspect hypothesis formed by the listener might be dependent on the *Aktionsart* of the proposition, but also on the overall communicative context. With telic propositions the default hypothesis might be that the speaker had a perfective aspect in mind ('< >'). In such a case the listener might be surprised if the following context made it clear that the speaker has had another aspect in mind. But since the aspect of the form is not actually marked for perfective aspect, but it was only a hypothesis, he/she simply revises his/her initial hypothesis. With atelic-durative propositions the initial hypothesis of the listener might be that the speaker has had progressive aspect in mind. In any case the listener is prepared to revise his initial hypothesis, if the following context urges him to do so.<sup>16</sup>

Compare the following examples with the German preterit form:

telic:

'Sie lief zur Oma. – Plötzlich (i.e. on the way) begegnete ihr ein Wolf!' (She walked/was walking to her grandma. – Suddenly, she met a wolf.)

{'<~~~~X>'} T<sub>0</sub> → <~{~~~~}~X> T<sub>0</sub>  
 {[<X>]} T<sub>0</sub>

Hypothesis: perfective aspect → reanalysis: progressive aspect

(More straightforward: 'Sie lief gerade zur Oma, da begegnete ihr ein Wolf.' She was walking to her grandma, when she met a wolf.)

static:

'Ihm war vorhin übel.'

(He felt/was feeling sick.)

Hypothesis: progressive aspect

<~{~~~~}~> T<sub>0</sub>

The semantic category of *tense* deserves some more detailed comments as well. As phasal aspect, tense is the temporal arrangement of two points in time or time frames.

16 Boland (2006: 55-56). Compare Winand's (2006: 117, 271) conception of an 'imperfectif global': <[ >.

These can be the *topic time*, *reference time(s)* or the *time of speech*. While the aspect relation between situation time and topic time is basically one of overlapping (set theory), tense is much more a deictic category that can also take the degree of remoteness into account.

In a first step, it is useful to follow Hans Reichenbach in differentiating between *relative tense* and *absolute tense*. We are used to speaking of absolute tense whenever one of the time frames to be arranged is the time of speech. In other cases we speak of relative tense.<sup>17</sup> With the same right we could have chosen to speak of relative tense, whenever one of the time frames to be arranged is the topic time.

	topic time ↔ reference time <b>relative tense (RT)</b>	reference time ↔ time of speech <b>absolute tense (AT')</b>	
<i>anterior</i>	[ ] { }	{ } T <sub>0</sub>	<i>past</i>
<i>simultaneous</i>	{ [ ] } [ { } ]	{ T <sub>0</sub> }	<i>present</i>
<i>posterior</i>	{ } [ ]	T <sub>0</sub> { }	<i>future</i>

<i>relative tense centered</i>	topic time ↔ time of speech <b>*relative tense (RT') = absolute tense (AT)</b>	<i>absolute tense centered</i>
<i>*anterior</i>	[ ] T <sub>0</sub>	<i>past</i>
<i>*simultaneous</i>	[ T <sub>0</sub> ]	<i>present</i>
<i>*posterior</i>	T <sub>0</sub> [ ]	<i>future</i>

**Table 3: Definitions of relative tense and absolute tense**

In languages marking tense it can be taken to be obligatory to locate the topic time. There are languages which encode the relation of topic time to time of speech (AT) in the same way as the relation of reference time to speech time (AT'). But there are also those languages which encode AT in the same way as the relation of topic time to reference time (RT). I choose to call them *absolute tense centered* vs. *relative tense centered* languages, respectively. Whereas English, German, and French are to be classified as absolute tense centered ('sie hat' vs. 'sie hat gehört'), Middle Egyptian is clearly relative tense centered (*sdm.n=s sw* 'she, (having) heard him' vs. *jw sdm.n=s sw* 'she (has) heard him').

One might ask why we should embrace such a framework of temporality as a four-step time frame model!?! One reason is that it allows us to account for a couple of verbal forms more precisely such as the following found in English, French, German, Spanish and other languages.

Compare:<sup>18</sup>

<i>had been writing</i> (Past Perfect Progressive):	past-anterior-progressive
<i>war am schreiben gewesen</i> (no name):	<i>item</i>

17 Reichenbach (1947: §51).

18 For the case of English: Kortmann (1991); for the case of French: Vet (2007: 24-25); for the case of Spanish: González (2003: ch. 1.2.3).

<i>había escrito</i> (Pretérito Pluscuamperfecto):	past-anterior-‘imperfective’
<i>hube escrito</i> (Pretérito Anterior):	past-anterior-perfective
<i>had written</i> (Past Perfect):	past-anterior-perfective (or ...-neutral) or past(-simultaneous)-resultative
<i>hatte geschrieben</i> (Plusquamperfekt):	<i>item</i>
<i>avait écrit</i> (Pluperfect):	<i>item</i>

Also, such a powerful model of temporality enables us to address phenomena of language change in a better way – for example the historical development of Perfect grams discussed below.

Note that a clear-cut difference between absolute and relative tense is sometimes difficult to draw. Let us compare the following examples of ‘over-composed’ forms in German.<sup>19</sup> There are nested constructions like ‘?Sie hatte gehört gehabt’, which is a nested ‘Perfect’ construction. Absolute tense is marked by the Simple Past form of ‘to have,’ while the two cascading Perfect grams (form of ‘to have’ + Perfect Passive Participle) mark two anterior points in time: [ $< >$ ] { } {T<sub>0</sub>} (or  $< >$  [ ] {T<sub>0</sub>}). Similarly, ‘?Sie wird hören werden’ is a nested construction of a form of ‘to become’ + Infinitive. The latter gram is normally analyzed as a Simple Future absolute tense, since, unlike in the case of ‘to have,’ within the Perfect gram, the form of ‘to become’ cannot be inflected for absolute tense itself. But in the case of the nested future construction above, it is used as absolute and relative tense at the same time: T<sub>0</sub> { } ‘ $< >$ ’. Obviously, the border between absolute and relative tense is not as clear-cut as expected. Actually, one could phrase even more nested sentences like ‘?Sie wird hören werden werden’ or ‘,??Sie hat gehört gehabt gehabt’. Whether these forms are acceptable to the listener only depends on the pragmatic context. Outside proper contexts these constructions are interpreted as being ‘over-composed’ simpler tenses. I argue that nesting of tense grams is only restricted by context and morpho-syntax, and that the so-called absolute tense marking is nothing but the special case of anchoring the tail of a chain of nested (relative) tense markers, beginning at the topic time, to the speech time.

### 3 The quality of *topic time* and the Present Perfect Puzzle

Earlier approaches to the temporality in languages, such as Klein’s do not include the concept of relative tense, but allow only for absolute tense. In a more powerful framework like Winand’s that takes both phasal aspect as well as relative tense into account, there is need for a means to distinguish between the two, since both relate time frames to one another. If we could not properly tell phasal aspect and relative tense apart, it remains an arbitrary decision whether to analyze an anterior relation (in the wider sense of the word) as denoting resultative aspect or as anterior relative tense. This is the reason why the *sdm.n=f* has been analyzed by some scholars as having *resultative(-simultaneous)* meaning, or as having (perfective-)*anterior* meaning by others.

This is where the idea of old comes back into play, to define the time frame selected by aspect as *the phase of a given process which the speaker wishes to make a statement about*.<sup>20</sup>

19 For the description of over-composed forms in French see Vet (2007: 22-25).

20 Compare: Bäuerle (1979: ch. 4.1, 4.2): ‘Betrachtzeit’; Klein (1994: 37 with en.1): ‘topic time’; Boland (2006: ch. 3). Nevertheless, the assumptions about the relation of time frames given by adverbial phrases in relation to this topic time is not always the same. Note that the fact that Winand (2006: p. 33-34) does not restrict the topic time in that way, is also somehow reflected in

Inspired by the works of Jürgen Bohnemeyer, Annerieke Boland gives the following definition of aspect and tense markers in language:

**Aspect** markers select the relevant parts of the temporal structure of a property or relation, including the pre- or post-state. It is only this selected part of the temporal structure that is the predicated property or relation of the argument(s). (Boland 2006: 44; underline: D. W.)

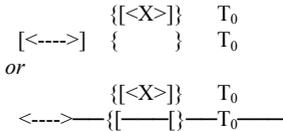
**Tense** markers locate the part of the event that is relevant to the discourse on the time axis in relation to a reference time interval, [...]. (Boland 2006: 56)

Within this framework, I understand the topic time of the proposition as being the *intersection* of the topic time frame singled out by phasal aspect markers, the topic time frame located by tense markers, and/or the topic time frame specified or located by aspectual or temporal morphemes and adverbial adjuncts.<sup>21</sup> For example, in the sentences ‘The door was already closed today’ and ‘I closed the door yesterday’ the following topic times intersect, building up the topic time proper:

- (A) ‘The door was already closed today.’
- <X>—{[—]}T<sub>0</sub>
- a1) resultative aspect (‘to be’ + Perfect Participle) → post-phase of <close>
- a2) ‘already’ adverbial marking resultative aspect
- <X>[<sup>a</sup>— ... —<sup>a</sup>
- b) past absolute tense (Simple Past ‘was’) → time frame prior to speech time
- {<sup>b</sup> }<sup>b</sup> T<sub>0</sub>
- c) ‘today’ → time frame of the day of speech time
- [<sup>c</sup> ]<sup>c</sup> T<sub>0</sub>
- or { } T<sub>0</sub>
- (B) ‘I closed the door yesterday.’
- {[<X>]} T<sub>0</sub>
- a) neutral aspect; hypothesis: perfective aspect (Simple Past) → kernel phase of <close>
- <sup>ra</sup><X><sup>ra</sup>
- b) past absolute tense (Simple Past) → time frame prior to speech time
- {<sup>b</sup> }<sup>b</sup> T<sub>0</sub>
- c) ‘yesterday’ → time frame of the day before the day of speech time
- [<sup>c</sup> ]<sup>c</sup> T<sub>0</sub>
- or { } T<sub>0</sub>

In subordinate clauses, I argue, the reference time of the subordinate clause and the topic time of the superordinate clause mutually narrow each other down.

‘Ich schloss die Tür, nachdem/als ich ein merkwürdiges Geräusch gehört hatte.’  
(I closed the door, after/when I had heard a strange noise.)




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his labels. What is called topic time here, he calls ‘moment de référence,’ and what is called reference time here, he calls ‘point de repère.’

21 Compare Boland (2006: 58): “Aspect markers select the part of the temporal structure of a property or relation that is relevant to topic time. Only this part helps build up the proper state of affairs description. Tense markers on the other hand locate the part of the state of affairs that is relevant to the conversation on the time axis [...]”.

The suggestion that the time frame singled out by aspect is not just any arbitrary time frame, but necessarily *includes* the time frame that the proposition is about as also specified by other means, has far-reaching consequences for the analysis of grammatical tenses. It provides a means for the differentiation between aspect and tense in claiming that higher level grammatical categories (tense, proposition truth value, habituality, ...) and (temporal) adverbial phrases typically refer to this time span and thus make it identifiable.<sup>22</sup> It was Jürgen Bohnemeyer who claimed that by paying attention to the question of which time frame adverbial adjuncts typically refer to, one can tell two opposite types of forms exhibiting anterior meaning (in the wider sense of the word) apart, identifying them as Resultatives and Anteriors, respectively.<sup>23</sup> Other than with Anteriors or Pasts, Resultatives do not typically allow for a relation of adverbials to the process time proper (situation time), but only for a specification of topic time or reference time (Klein: FIN-linking; Bohnemeyer: R/TT-specification).<sup>24</sup> Another test has been put forward by Nedjalkov & Jachontov. They claim that ‘pure’ Resultatives are easily compatible with ‘still,’ but Anteriors / Past are not.<sup>25</sup>

Compare (‘\*’ marks unacceptable sentences; ‘?’ marks less acceptable sentences):

- It is still closed. (pure Resultative)
- Es ist immer noch geschlossen. (pure Resultative)
- It is closed now. (Resultative)
- Es ist jetzt geschlossen. (Resultative)
- \*It is closed yesterday. (no Anterior nor Past)
- \*Es ist gestern geschlossen. (no Anterior nor Past)
- \*I have still closed it. (no pure Resultative)
- ??Ich habe es immer noch geschlossen. (no pure Resultative)
- I have closed it now. (Resultative)
- Ich habe es jetzt geschlossen. (Resultative)
- I have recently learned that the match is to be postponed.<sup>26</sup> (Anterior or Past)
- Ich habe vor kurzem erfahren, dass das Spiel verschoben werden muss. (Anterior or Past)
- ??I have closed it yesterday. (no Anterior nor Past)
- Ich habe es gestern geschlossen. (Anterior or Past)

From tests like these we can learn that the English Present Perfect as well as the German Present Perfect with a form of ‘to be’ is a pure Resultative. (For a moment we do exclude those verbs in German which do not form a Present Perfect with ‘to have’

22 Boland (2006: 55). For the idea of a hierarchy of categories see Dik (1997: ch. 9), Anstey (2002), and Boland (2006: 65-66); Winand (2006: fig. 63, p. 192).

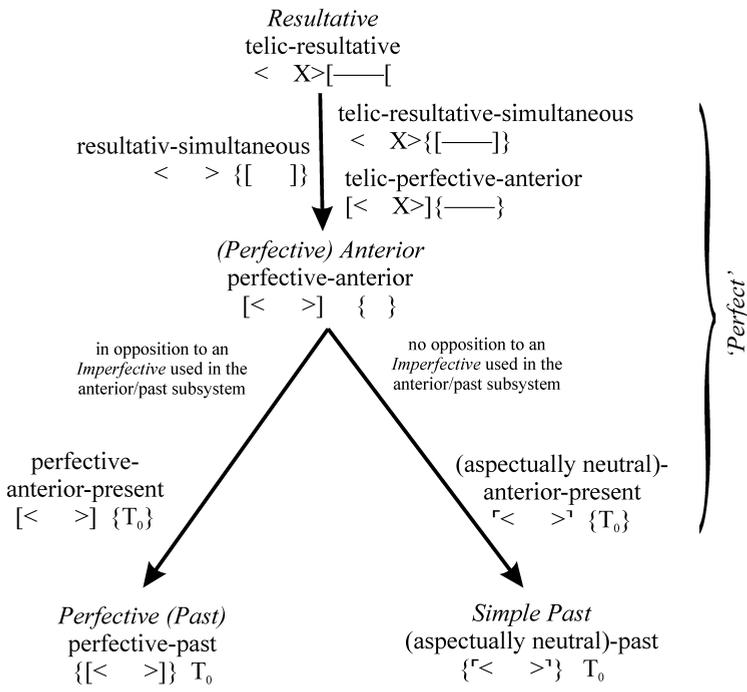
23 Bohnemeyer (2003). The question of the relation of adverbial phrases in relation to aspect or relative tense has puzzled scholars for long: e.g. Bäuerle (1979: ch. 4.1, 4.2); Klein (1994: ch. 9, compare also: en. 1 of p. 37); Winand (2006: 189-193), Boland (2006: ch. 3.4).

24 Bohnemeyer (2003), claiming that only a temporal system allowing for phasal aspect as well as relative time is able to account for this problem properly. Compare: Klein (1994: ch. 9); followed by Winand (2006: 192-193, 260-261; in contradiction to p. 191-192). Also note that there is still always the possibility of relating an adverbial phrase to the uninflected state-of-affair (Klein: INF-linking; Bohnemeyer: E/TSit-specification), e.g. ‘I am looking forward to sleeping tomorrow’, ‘das Baden gestern’ – but that is a somewhat special case.

25 Nedjalkov (2001: 930); Nedjalkov & Jachontov (1988: 15-16).

26 Klein (1994: 113) with critical remarks. Curiously, ‘??Recently, I have learned ...’ and ‘??I have learned recently ...’ are much less acceptable.

but with ‘to be’ only.) The Present Perfects with a form of ‘to have’ of both languages fail the test of Nedyalkov & Jaxontov for pure Resultatives, but Bohemeyer’s test still speaks in favor of Resultatives. In the case of the German Present Perfect we can see that it can generally be used in a way that places topic time simultaneous to situation time, i.e. as a past tense with perfective or neutral aspect. In English, this stage is only reached in some particular pragmatic contexts: the Perfect of the Recent Past, e.g. ‘I have recently/just learned that ...’, the Perfect of Persistent Situation, e.g. ‘we’ve shopped here for two years,’ and the Experiential Perfect: ‘Bill has been to America’.<sup>27</sup> Obviously, the Perfect forms of English and German are not exactly on the same stage of a quite common development from Resultatives via Anteriors towards (perfective or aspectually neutral) Pasts that Bybee et al. have reconstructed.<sup>28</sup> I translate the main tracks described by Bybee et al. into the framework described above in the following way:



**Figure 1: ‘Perfects:’ The pass from Resultatives via Anteriors to Perfectives and Pasts**  
(compare: Bybee et al. 1994: fig. 3.1 on p. 105)

Perfect grams on their way between pure Resultatives and pure Anteriors are sometimes restricted to contexts, in which the state-of-affairs described is somewhat very ‘relevant’ to reference time (e.g. the proposed ‘present relevance’ of the English

27 For the types of Present Perfect usages see Klein (1994: 111-113). (Note: Within his framework that does not contain relative tense and does not restrict topic time, he analyzes only the first of these as not exhibiting resultative aspect, though.)  
28 Bybee et al. (1994: ch. 3). Similarly: Maslov (1988).

Present Perfect). The degree of relevance of a state of affair to reference time is a very subjective matter, though. Obviously, the reason for this restrictive use is that the time frame that the new reference time singles out has been the resultative post-state of a telic process before. So some of the characteristics of the meaning of the Resultative are still felt to have to be fulfilled in order to use this gram even later: a relation of causality between process and post-state<sup>29</sup>, telicity of the predication, persistence of the resultative state, .... Those restrictions vanish more and more in the course of the development of the Perfect gram from a pure Resultative into a pure Anterior.<sup>30</sup> This explanation is able to account for various pragmatic restrictions found with the use of the English Present Perfect.

#### 4 Aspect and tense frameworks in Egyptology compared

As stated above, I argue that the inner-egyptological concepts of the School of Agent Aspect, the Comrie School, the Cohen School, and the Binnick School can all nicely be translated into the fine-tuned framework defined above.

Basically, what the Binnick School calls ‘perfect’ and ‘prospective’ aspect combines what is called anterior/posterior relative tense or resultative/mellic phasal aspect in this framework; what Binnick calls *Aktionsarten* is what is called phasal aspect here; and what Binnick calls Aristotelian aspect is what is called *Aktionsarten* here (Vendler classes).

The position of the agent in relation to the process proper identified within the framework of the School of Agent Aspect can be equated with reference time. The same holds true for the position, from which situation time is looked at as identified by viewpoint aspect. Nevertheless, there are subtle differences. One might equate viewpoint aspect and agent aspect with phasal aspect/relative tense in the following way:

<i>phasal aspect and relative tense</i>	<i>viewpoint aspect</i>	<i>agent aspect</i>
{ } ] < > pre-phase		⌚ < > (before)
< > { [ ] post-phase		< > ⌚ outside / behind
[ < > ] { } kernel process	< > ⌚ from outside;	
{ } [ < > ]	⌚ < > whole; punctual	⌚ < > (before)
< { } [ ] > internal phase		
{ ' < ' } > 'neutral'	< ⌚ > from inside; internal structure	< ⌚ > inside

**Table 4: Phasal aspect, viewpoint aspect, and agent aspect equated**

As opposed to the other schools like the Comrie School, a common feature of both the aspect systems of the School of Agent Aspect and of the Cohen School is that they aim at a unification of typical Past meaning and typical Present Perfect meaning, as found in the variant interpretations of Present Perfect grams, under one superordinate

<sup>29</sup> Compare Boland (2006: 43).

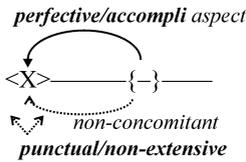
<sup>30</sup> Nedjalkov & Jaxontov (1988: 41-44) describe four stages: pure resultatives → resultatives with some properties of anteriors (Nedjalkov & Jaxontov: ‘perfects’) → anteriors with some properties of resultatives → pure anteriors.

label ‘perfective aspect.’<sup>31</sup> This triggers an understanding of the label ‘perfective’ as *perfectum (habere/esse)*, i.e. as completed/achieved (‘accompli’), as opposed to complete/whole (Comrie School). Subsequently ‘perfective/accompli’ actually refer to the anterior relation of situation time and a reference time. The difference between Past meaning and Resultative/Present Perfect meaning are reintroduced as subdivisions of ‘perfective/accompli’ aspect. The labels for these subdivisions either refers to the felt duration of the topic time (‘punctual / non-extensive’ vs. ‘durative / extensive’), or they refer to the relation between topic time and a reference time (‘concomitant’ vs. ‘non-concomitant’), or they refer to the relation between situation time and topic time (‘résultatif’ vs. ‘perfectif’[!]).<sup>32</sup>

**Cohen School & School of Agent Aspect**

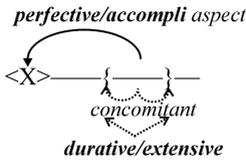
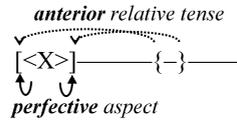
**This framework**

< > = kernel process; [ ] = topic time; { } = reference time



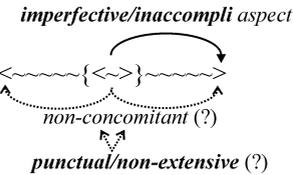
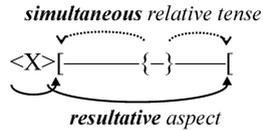
... 3m.n=f  
he seized  
(he has seized)

*Anterior*  
... 3m.n=f  
he seized  
(he has seized)  
*Pseudoparticipe*  
jw=f<sup>c</sup>q.ø  
he entered

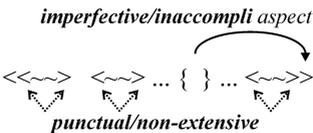
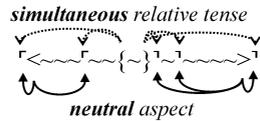


... 3m.n=f  
he has seized  
jw=f<sup>c</sup>q.ø  
he has entered  
jw=f 3m.ø  
he is seized

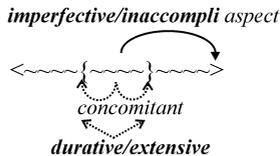
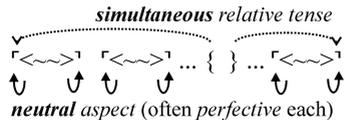
*Pseudoparticipe*  
jw=f<sup>c</sup>q.ø  
he has entered  
jw=f 3m.ø  
he is seized



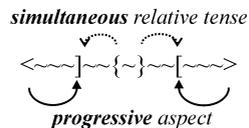
*Imperfective*  
... jyi=f  
he comes



*Imperfective*  
... (=f/sw) jyi=f  
he (regularly)  
comes  
he used  
to come



*Periphrastic Imperfective*  
jw=f hr jyi.t  
he is coming



31 Cohen (1984: 122, 125 with fn.170; 1989: 63, 70, 95-96); Mugler (1988: 93-95).

32 Vernus (1986; 1990); Hannig (1982: 44-46; 1987: 38-40); Malaise & Winand (1999: §362).

Also Klein has suggested to use the label ‘perfective’ as a cover-term. He groups inchoative, completive, and perfective phasal aspect under the label ‘perfective.’<sup>33</sup> In the *Grammaire raisonnée* Winand grouped *completive*-anterior and resultative-simultaneous meaning under the label ‘accompli,’ differentiating between ‘accompli perfectif’ and ‘accompli résultatif, parfait.’<sup>34</sup> In his *Temps et aspect*, however, he combines his earlier approach with Klein’s grouping of inchoative and completive aspect, differentiating now between ‘perfectif momentané’ and ‘perfectif résultatif.’<sup>35</sup>

His metaphor for his ‘perfectif momentané’ grouping goes as follows:

[...] le perfectif [momentané, D.W.] sélectionne l’intervalle qui correspond, sur le plan cognitif, au moment saillant du procès. (Winand 2006: 181)

As a consequence, especially within Egyptology, the labels ‘perfective’ and ‘accompli’ are used for such diverse groupings of what translates into phasal aspects and relative tense as the following:

meaning paraphrase	aspect				scholars / works
‘whole’ ‘complete’ ‘unanalyzable’ ‘outside’			<i>perfective</i>		Comrie, Binnick, Loprieno, Allen
‘outside’			<i>perfektiv</i>		Ritter
‘T <sub>Top</sub> AT T <sub>Sit</sub> ’	<i>perfective</i>				Klein
	<   >	<   >	< >		
<b>phasal aspect</b>	<b>inchoative</b>	<b>completive</b>	<b>perfective</b>	<b>resultative</b>	<b>phasal aspect</b>
	<b>anterior</b>	<b>anterior</b>	<b>anterior</b>	<b>simultaneous</b>	<b>relative tense</b>
	<   > { }	<   > { }	< > { }	< > { }	
‘behind’ (→ ‘outside’)			<i>perfektiv</i> (from later perspective)	<i>perfektiv</i> (simultaneous perspective)	Heger
			<i>perfektiv-</i> <i>punktuell</i>	<i>perfektiv-</i> <i>durativ</i>	Hannig
‘completed’ ‘achieved’ (→ ‘complete’)			<i>perfectif / acc.</i> <i>non-concomitant</i>	<i>perfectif / acc.</i> <i>concomitant</i> (= <i>parfait</i> )	Cohen
			<i>accompli</i> <i>non-extensif</i>	<i>accompli</i> <i>extensif</i>	Vernus
‘completed’ / ‘salient phase’		<i>accompli</i> <i>perfectif</i>		<i>accompli</i> <i>résultatif</i> (= <i>parfait</i> )	Malaise & Winand
			<i>perfectif</i> <i>momentané</i>	<i>perfectif</i> <i>résultatif</i>	Winand
meaning paraphrase	aspect & relative tense				scholars / works

**Table 5: Phasal aspects and relative tense associated with the labels ‘perfective’ and/or ‘accompli’**

(Note that, in accordance with main stream contemporary linguistic discussion, the label ‘perfective’ in this article (see Table 2 above) is used in the narrow sense of the Comrie School.)

33 Klein (1994: 102, 108, 118 with en. 7).

34 Malaise & Winand (1999: §362).

35 Winand (2006: 182-184).

Note that the label ‘imperfective’ is also commonly used as a cover-term for grams that can exhibit at least two of the following meanings:<sup>36</sup>

- habitual quantity & neutral or perfective(!) aspect:           ‘< >’ ‘< >’ ... ‘< >’
- general scope & tenseless(!):                                   ‘< >’
- neutral aspect & simultaneous/present tense:               {‘< ’} >
- progressive aspect:   < ] [ >.

One often does not need to distinguish more than two or three different aspectual groupings in grams in a specific language, for example: perfective vs. ‘imperfective’ (vs. resultative), or neutral vs. progressive (vs. resultative). But in order to compare different binary or trinary aspect systems across different languages or language groups, there is the need of a more fine-tuned *tertium comparationis*. I believe phasal aspect to be a proper tool. Describing the groupings of phasal aspects in specific grammatical forms in different languages can thus lead to a typology of aspect in languages.

## 5 Tense and aspect of the Classic Middle Egyptian *sdm.n(=f)*

With this fine tuned *instrumentarium*, we are now ready to find a proper place for the Classic Middle Egyptian *sdm.n(=f)* on the path from Resultatives via Anterior to Perfectives / Pasts. From its grammatically unmarked subordinate use as anterior tense in past, present and future contexts, it is obvious that it is not marked for absolute tense.<sup>37</sup> This can be taken to be *opinio communis* as far as texts from the 3<sup>rd</sup> and earlier 2<sup>nd</sup> millenniums BCE are concerned.

First, let us compare two opposite descriptions of its meaning. Hannig described it in the following way:

*sdm.n(=f)* drückt in erster Linie die vollendete Handlung aus. Die Handlung liegt also abgeschlossen vor, in ihrem ganzen Ausmaß. Sie ist gerafft und kann in ihrer Gesamtheit betrachtet werden. Deshalb wird die Verbalform unbedingt punktuell, weil eine Längung nicht interessiert und weil sie nicht unterbrochen werden kann. [...] Wir erfahren durch das *sdm.n(=f)* vor allem, daß das Subjekt der Handlung sie zu einem Ende gebracht hat. (Hannig 1991: 290)

[...] „er hat gehört“; d.h. er hat zu irgendeinem Zeitpunkt das Hören abgeschlossen, was danach geschah, in welchem Zustand der Handelnde sich danach befand, welche Beziehung zum Gegenwartspunkt herzustellen ist: alle diese Fragen werden von der ägyptischen Form nicht berührt. (Hannig 1991: 280)

According to him, it is a relative tense version of a Perfective verb form as described by Östen Dahl:

A P[ER]F[ECTI]V[E] verb will typically denote a single event, seen as an unanalysed whole, with a well-defined result or end-state, located in the past. More often than not, the event will be punctual,

36 Comrie (1976: tab.1, p. 25) is often cited in this respect. Nevertheless he himself stressed the fact that this clustering is language-specific (1976: 30).

The fact that general events and every single event in habitual propositions should be analyzed as exhibiting *perfective* aspect and that these propositions are essentially *tenseless* is also recognized by Satzinger (1987: §8, 11 [‘Aorist’]).

37 Vernus (1984).

or at least, it will be seen as a single transition from one state to its opposite, the duration of which can be disregarded. (Dahl 1985: 78).

So, according to Hannig's description, the *sdm.n(=f)* is to be classified as a (perfective) *Anterior*.

Jean Winand, on the other hand, argues that in some syntactic environments the *sdm.n(=f)* conveys inchoative aspect or completive aspect depending on the *Aktionsart* of the predication ('perfectif momentané / accompli ponctuel'). In other syntactic environments, he claims that it exhibits resultative aspect, though ('perfectif résultatif / accompli résultatif').<sup>38</sup>

Now, let us compare the following crucial examples:<sup>39</sup>

*h<sup>c</sup>.n jr<sub>i</sub>.n(=j) hrw(.w) 8* [ $\langle \sim \sim \sim X \rangle$ ] {T<sub>0</sub>}  
 rise.PFV;ANT act.PFV;ANT[=1SG] day(.M)[.PL] ↔ 8[M.PL]  
*hr d<sup>c</sup>r h<sub>3</sub>s.t tn* <{ }~{ }>  
 at search\INF desert.F[.SG] SG\F.DEM  
 'Then, I spent eight days searching through this desert region.' (*Hammamat* 199,7; 20<sup>th</sup> c. BCE)

... *jr<sub>i</sub>.n(=j) hrw(.w) 3* [ $\langle \sim \sim \sim X \rangle$ ] {T<sub>0</sub>}  
 act(\NMLZ?).PFV;ANT=1SG day(.M)[.PL] ↔ 3[M.PL]  
*w<sup>c</sup>i.kw* {[<—>]}  
 single\STAT;RES.1SG  
 'and I spent three days alone, ...' (*Sh.S.* 41; probably 20<sup>th</sup>-18<sup>th</sup> c. BCE)

*pr<sub>i</sub>.n(=j)* [ $\langle X \rangle$ ] {T<sub>0</sub>}  
 go\_forth(\NMLZ).PFV;ANT=1SG  
*w<sup>c</sup>b.kw* <++++>—{[—]}—  
 clean\STAT;RES.1SG  
 'Purified, I have gone forth.' (*CT VI*, 120 k; Gauthier 1902: pl. XIX, III.2; 20<sup>th</sup>-18<sup>th</sup> c. BCE)

Bohnenmeyer's adverbial reference test shows that topic time of the thematic *sdm.n(=f)* as well as the predicative *sdm.n(=f)* is the phase of the process proper. In each case the adverbial adjunct refers to the time span denoted by the verb – and not to its result state.<sup>40</sup> So it is not resultative and, consequently, the feature of anteriority (in the wider sense) must be identified as anterior tense. Secondly, the adverbial adjunct refers to the *whole* time span of X years – not to the initial or final phase only. So it is neither inchoative nor completive aspect. It was, by the way, exactly this type of sentence that made also Hannig wonder and state:

Es ist aber zu betonen, daß es [i.e. the *sdm.n(=f)*, D.W.] in der Vorstellung punktuell ist, nicht etwa obligatorisch in der Realität. Das ergibt sich aus Beispielen wie *jr<sub>i</sub>.n(=j) hrw 3 w<sup>c</sup>i.kw* „Ich habe 3 Tage allein verbracht“. (Hannig 1991: 278)

I argue that the impression of punctuality, wholeness and unanalyzability often described in connection with perfective aspect, is simply due to the fact that perfective

38 Winand (2006: fig. 85 [p. 234]; compare fig. 60 [p. 184], fig. 62 [p. 188], fig. 70 [p. 202], fig. 78 [p. 212], and fig. 86 [p. 235]).

39 For the system of glosses see the *Leipzig Glossing Rules* (Additional abbreviations: STAT = stative; ANT = anterior [instead of misleading PRF = perfect]).

40 Compare the critical remarks against an interpretation of the *sdm.n(=f)* as resultative aspect, made by Hannig (1987: 30-31; 1991: 280). So also Allen (1991: 28).

aspect other than e.g. progressive aspect does not explicitly place a border of the topic time within the situation time. The internal structure of the topic time frame is therefore much less prominent as in the case of e.g. progressive aspect.

Therefore, if one embraces the clarification of the quality of topic time suggested, the *sdm.n(=f)* is to be classified as a (perfective) Anterior<sup>41</sup>.

## 6 Unexpected uses of the predicative Earlier Egyptian *sdm.n(=f)*

The analysis of the *sdm.n(=f)* as a perfective Anterior also accounts for three special semantic phenomena noticed in the uses of the *sdm.n(=f)*: the performative *dj.n(=j)*, the negated Anterior *nj sdm.n(=f)*, and the special meaning of the *sdm.n(=f)* of quality lexemes.

### 6.1 The performative *dj.n(=j) n=k* ‘Herewith, I give to you ...’

In so-called performative speech acts, the speech act coincides with the performance of the act described. Some languages like German or English choose to verbalize the performative by using an Imperfective or Present form. They give tribute to the feeling that during the speech act – as short as it may be – the performance is incomplete (neutral or progressive aspect) and not completed (simultaneous or present tense). Other languages like Middle Egyptian obviously choose to verbalize the performative by using a form bearing perfective aspect. They are stressing the fact that with the completion of the speech act the performance is considered complete (→ perfective aspect).<sup>42</sup> Even if during the speech act itself, the performance might technically not be complete yet, the completeness is only a blink of an eye away. The matter becomes even more complicated in the case of punctual verbs like the Egyptian achievement *rdj* ‘to give.’ A complete coincidence between the punctual act of ‘giving’ and the short, but still durative speech act is difficult to achieve other than through slow-motion. So technically, the act of ‘giving’ might actually be complete (→ perfective aspect) / completed (→ anterior tense) at the end of the slightly longer speech act. In case of the Egyptian performative *dj.n(=j) n=k*, there is still the possibility that the Egyptian actually handed the object over before they spoke the words ‘Herewith, I have given you ...’ Be that as it may, thinking it through, there is nothing strange about a perfective Anterior like *dj.n(=j)* (or even a Resultative) being used in performative speech acts.<sup>43</sup>

41 Note that the gram label ‘Perfective’ is used for a perfective-past forms, not for perfective-anterior forms by Dahl (1985: 78), Bybee et al. (1994: ch. 3.14), and others.

42 Junge (1970: 28). Note that Junge uses the label ‘terminative’ for what is called perfective(-anterior) here, and ‘perfektischer Zeitbezug’ for what is called resultative-simultaneous here (compare p. 24-27).

43 Some scholars argue for a special present or present ‘perfect’ tense form and/or interpretation. For a history of this discussion see Hannig (1991: 156-157, 275); recent expressions of opinion: Loprieno (1995: 77); Schenkel (2005: 188, Anm.; 2006: 48). Winand (2006: 235 with fn.27) argues for an interpretation as resultative. Allen (2000: 229) translates it with English Present Perfect.

## 6.2 The negated *sdm.n(=f)* and the Bounded Event Constraint

In its prototypical use, the negated *sdm.n(=f)* conveys a meaning ‘does not hear’ or ‘cannot hear.’<sup>44</sup> Already Rainer Hannig argued that this phenomenon has something to do with the perfective aspect of the form.<sup>45</sup>

From a typological point of view, the usage of a perfective anterior/past form like the *sdm.n(=f)* as standard negation in general contexts or present/simultaneous contexts is quite exceptional. Nevertheless, there are some languages that exhibit comparable patterns: Beja (Cushitic / Afroasiatic) and Tunica (isolated; U.S.A.).<sup>46</sup>

Easy to explain are those uses in which the performance of the process is denied *in general*, i.e. for past, present and future times: ‘does not hear in general.’ Time does not actually play *any* role in those propositions. By choosing a form marked for perfective aspect, Egyptian at least focuses on the fact that it is the *whole / complete* process rather than a part of it that has never taken place, is not taking place, is not going to take place. Often, this general denial can trigger a modal interpretation: ‘cannot hear.’ It is still interesting to see that the fact that the form is normally used with anterior tense meaning does not prevent it from being used with tenseless meaning. Obviously, the markedness for perfective aspect is somewhat more prominent in this form than its markedness for anterior tense.

More difficult to account for are those uses which seem to deny the performance of the process during a limited time span, which is simultaneous to another time frame given by the context: ‘while he does not/cannot hear.’ Clear examples, however, are hard to find.<sup>47</sup> One would expect a form marked for simultaneous relative tense to be used in this context, i.e. the Imperfective *sdm=f / mri=f*. And indeed, it might have rarely been used in the Old Kingdom (and before).<sup>48</sup>

Compare:

*b(w).t- Wnjs -pw ššs m kkw*

abomination.F.SG- ‘Uanjas’ -COP pace\INF in dark(.M)[.SG]

*nj mš=f šhd.w*

NEG see\IPFV=3SG\M turn\_upside\_down\PRTC[\DISTR].M\PL

‘It is Uanjas’s abomination to perambulate in the dark,

without being able to see those upside-down (i.e. those in the other world).’ (*Pyr.* 323a-b<sup>w</sup>)

44 Satzinger (1968: §30-37); Allen (1984: §436-437); Malaise & Winand (1999: §638-640, 664).

45 Hannig (1984). Winand (2006: 350) explains the meaning differently. For a criticism of his theory of perfective-inchoative aspect see fn.63.

46 Miestamo (2005: 140, 54-55) (With many thanks for his effort to browse through his sample again for me concerning this question). In the case of Tunica the ‘Semelfaktiv’ gram (= single events) might actually be a perfective aspect gram (personal comment by Matti Miestamo, e-mail Aug. 29<sup>th</sup>, 2008). For the classification of the preterit form in Beja as a Perfective (perfective-past) see Dahl (1985: 70).

47 Possible examples: Satzinger (1968: 25-26): (22) ‘Die Nachhut steht dort ... ohne kämpfen zu können [*n hš.n=sn*],’ (24) ‘wenn du ihn untersuchst, ohne ein Leiden in seinem Bauch finden zu können [*n gm.n=k*],’ (24) ‘der eine Verwundung zufügt, ohne dass man ihn sehen kann [*n mš.n.tw-f*],’ (38) ‘könnt ihr denn nicht rudern [*n hn{n}.n-tn*]?’ Allen (2000: 236: ‘She was going around the room, (but) she could not find [*nj gm.n=s*] the place in which it was being done.’

48 Satzinger (1968: §12, 24-25); Allen (2000: ch. 20.15). Compare also: Satzinger (1968: §9, 18); Malaise & Winand (1999: §665).

In a later stage of the language, it developed a new means to express the denial of ongoing performance simultaneous to another time frame: *nm sw hr sdm* ‘he is not listening’ (progressive-simultaneous → aspectually neutral-simultaneous).<sup>49</sup> In Classic Middle Egyptian, however, *nj sdm.n=f* seems to have been used. I cannot but explain this as an expansion of the usage in tenseless contexts to uses in contexts demanding simultaneous tense: ‘while he does not hear in general’ / ‘he does not hear in general’ → ‘while he does not hear (in general / habitually)’ / ‘while he does/did/will not hear (then)’ (/ ‘he does not hear (in general / now)’).

It is worth noting that the so-called *Bounded Event Constraint* (Carlotta Smith), which in the terminological framework used here translates into Perfective Event Constraint, does not apply in this context. It basically states that perfective aspect and present tense mutually exclude each other.<sup>50</sup> The kernel idea of it goes as follows: The markedness for perfective aspect – as opposed to neutral aspect – explicitly stresses the fact that the process is complete / whole. And this idea is cognitively incompatible with present tense, because one cannot assert completeness / wholeness, if the end lies in the future of the ‘viewpoint,’ i.e. the speech time or a simultaneous reference time.<sup>51</sup> Note that this argument only applies in case of affirmative propositions. In typical negated propositions, the performance is denied – so the question of whether one can assert the performance of the process until its end or not does not even arise.

For the negation of anterior events, Egyptian uses another verb form, whose identification is still debated. Some scholars argue that this is the *Imperfective sdm(=f)*, others argue that it is an old perfective and/or anterior form that I choose to call *Old Anterior sdm(=f)*.<sup>52</sup> The identification of the form in question as Imperfective would imply a *flip-flop asymmetry* in Middle Egyptian standard negation:

<i>sdm.n(=f)</i> (perfective Anterior) :	<i>sdm(=f)</i> (Imperfective)
<i>nj sdm(=f)</i> (?Imperfective?) :	<i>nj sdm.n(=f)</i> (perfective Anterior).

Such a flip-flop asymmetry, however, seems to be unattested so far in languages of the world.<sup>53</sup>

Besides the doubts raised from an typological point of view, there are three language internal arguments in favor of the identification of the standard anterior negation form as an Old Anterior *sdm(=f)*:

49 Referring to affirmative *=f/sw hr sdm*, compare: Vernus (1990: ch. 9). Malaise & Winand (1999: §670); Loprieno (1995: 169).

50 Smith (2007: 230).

51 Note however that languages like Russian can use perfective forms in future contexts. The Bound Event Constraint is therefore more like a rule to not label those aspects found in languages as ‘perfective’ that are prototypically used with present tense.

52 Pro ‘Imperfective:’ e.g. Hannig (1984); Kammerzell (1988: §6); Loprieno (1986: 62-63). Pro ‘Old Anterior:’ e.g. Satzinger (1968: §6-8, 18-19, 24-25); recent expressions of opinion: Loprieno (1995: 209); Malaise & Winand (1999: §634); Allen (2000: 265-266); Schenkel (2005: 201).

53 Compare Miestamo (2005: 55). (At least, I was not able to find any example like the proposed A/CAT/TAM/DISPL flip-flop asymmetry.)

– Morphology. The form in question does not perfectly match the morphology of the Imperfective *sḏm(=f)*. While the Imperfective seems to have had a vocalization pattern \*KvKvK (*ʒmm(=f)*, *mʒʒ(=f)*, *wnn(=f)*) the form in question seems to have had a vocalization pattern \*KvKKv (*nj ʒm(=f)*, *nj mʒ(=f)*, \**nj wn(=f)*). Also, the forms of the irregular verb (*r*)*dī* ‘to give’ do not match: *dī(=f)* vs. *nj rdī(=f)*.<sup>54</sup>

– Semantics. While the usage of the perfective Anterior *sḏm.n(=f)* as a negation of tenseless and simultaneous events can partly be explained and can be motivated by its markedness for perfective aspect (see above), no such explanation can be put forward in case of the Imperfective. The Imperfective can be used with aspectually neutral-simultaneous meaning, with progressive-simultaneous meaning, and with aspectually neutral, habitual or general meaning. None of those three can account for the single event, anterior meaning of the *nj sḏm(=f)*. In the light of the argument that the *sḏm.n(=f)* had been picked as the standard negation of tenseless events due to their markedness for perfective aspect, it would be inconsequent to argue that the Imperfective had been picked due to its unmarkedness for aspect.

– Paradigma. Looking at the negated Anterior Passive *nj sḏm.w(=f)*, we can see that besides its use for the negation of tenseless-perfective propositions, it is also rarely used for the negation of anterior-perfective propositions.<sup>55</sup> This might be taken as a hint that also the *nj sḏm(=f)* and agglutinative passive *nj sḏm.tw(=f)* in anterior propositions are perfective forms, i.e. the Old Anterior.

Similarly, the negated Anterior *nj sḏm.n(=f)* and *nj sḏm.n.tw(=f)* are rarely used for the negation of anterior propositions (in the wider sense of the word) in the Old Kingdom. I am going to suggest that this is a negation with an early telic-simultaneous-resultative, rather than perfective-anterior meaning.<sup>56</sup> In the case of an negated passive *nj sḏm.tw(=f)*, rarely used in tenseless/simultaneous contexts, it is not always clear whether this is the Imperfective *sḏm(=f)* or the Old Anterior *sḏm(=f)*, see above (fn. 48). If one chooses to analyze some instances of these three forms as perfective Anteriors, there were even more cases of perfective Anteriors oscillating between anterior and tenseless/simultaneous meaning in Egyptian.

So typological, morphological, semantic, as well as paradigmatic considerations all speak in favor of an identification of the *sḏm(=f)* in question as a perfective Anterior (Old Anterior). That the younger Anterior *nj sḏm.n(=f)* is typically used in *perfective-tenseless/simultaneous* contexts, while the Old Anterior *nj sḏm(=f)* is used in *perfective-anterior* contexts, can be attributed to different stages of both forms on their journey from Resultatives via Anteriors (= perfective-anterior) to Perfectives (= perfective-past). I argue that the Old Anterior is closer to a Perfective than the

54 Satzinger (1968: §24-25); Allen (2000: ch. 20.2). Schenkel (2002), but note that he claims that *mʒʒ* can exhibit different Imperfective stems depending on the type of its subject: *mʒʒ=ʒ*, but *mʒʒ=sn > mʒʒ=sn*, *mʒʒ- > \*mʒʒ-*; Schenkel (2007), but note that he claims that *ʒmm* can exhibit different Old Anterior stems depending on the type of its subject: *ʒm=ʒ*, *ʒm=sn*, but *ʒmm-*. But even if that is true, the opposition *ʒmm=ʒ/dī=ʒ* vs. *ʒm=ʒ/rdī=ʒ* is still diagnostic.

55 Anterior: Malaise & Winand (1999: §682). Tenseless/general/habitual: Malaise & Winand (1999: §663); Allen (2000: ch. 20.13); Satzinger (1968: §18). Both: Allen (1984: §506).

56 Satzinger (1968: §27-28 [e.g. *jw nḥm.n-f T. ... n rdj.n-f šw, n ḥʒb.n.tw*]) referring to Edel (1955/1964: §535-536); Allen (1984: §435). Winand (2006: 350) claims that most verbs attested in this use are telic.

younger Anterior and thus the anterior tense of the Old Anterior is marked more strongly than in the case of the younger Anterior.

Following this line of argument, the subsystem of negated indicative propositions in Earlier Egyptian can be summarized as follows:

<i>tense / scope</i>	<i>aspect</i>	<i>form</i> <sup>57</sup>	active	passive
simultaneous(?)	resultative(?)	( <i>Neg. Anterior</i> ) <sup>a)</sup>	( <i>nj sdm.n=f</i> )	( <i>nj sdm.n.tw=f</i> )
<b>anterior</b>	perfective	( <i>Neg. Anterior Passive</i> ) <sup>b)</sup> <i>Neg. Old Anterior</i> <sup>c)</sup>	<i>nj sdm=f</i>	( <i>nj sdm.w=f→</i> ) <i>nj sdm.tw=f</i>
tenseless / general (or simultaneous)	<b>perfective</b>	<i>Neg. Anterior Passive</i> <sup>d)</sup> <i>Neg. Anterior</i> <sup>e)</sup>	<i>nj sdm.n=f</i>	<i>nj sdm.w=f</i> <i>nj sdm.n.tw=f</i>
tenseless / general	<b>perfective</b>	( <i>Neg. Old Anterior</i> )? <sup>f)</sup>	( <i>nj sdm=f</i> )	( <i>nj sdm.tw=f</i> )
<b>simultaneous</b>	neutral	( <i>Neg. Imperfective</i> ) <sup>g)</sup>		
simultaneous	<b>progressive</b>	( <i>Neg. Periphr. Imperfective</i> ) <sup>g)</sup>	( <i>nn sw hr sdm</i> )	
simultaneous	<b>completive</b> (?)	<i>Neg. Completive</i> <sup>h)</sup>	<i>nj sdm.t=f</i>	( <i>nj sdm.t=f</i> )
simultaneous	<b>resultative</b>	( <i>Neg. Pseudoparticiple</i> ) <sup>k)</sup>	( <i>nn sw sdm.ø</i> )	
<b>posterior</b>	neutral	( <i>Neg. Posterior Passive</i> ) <sup>m)</sup> ( <i>Neg. Posterior</i> ) <sup>m)</sup> ( <i>Neg. Periphr. Posterior</i> ) <sup>o)</sup>	( <i>nj sdm.w=f→</i> ) ( <i>→nn sw r sdm</i> )	( <i>nj sdmm=f→</i> ) <i>nj sdm.w.tw=f</i> )

**Table 6: Negated indicative sentences in Earlier Egyptian**

So Earlier Egyptian standard negation exhibits a rather complex picture:

<i>tense</i>	<i>aspect</i>	<i>scope / quantity</i>	<i>affirmative</i>	<i>negated</i>
simultaneous	<b>resultative</b>		<i>Pseudoparticiple</i>	→ anterior-perfective
simultaneous(?)	<b>resultative</b> (?)		rarely OK: <i>Anterior</i>	rarely OK: <i>Neg. Anterior</i>
anterior	<b>perfective</b>	single event	rarely: <i>Old Anterior</i> <b><i>Anterior</i></b> <i>Anterior Passive</i>	<b><i>Neg. Old Anterior</i></b>  rarely: <i>Neg. Anterior Passive</i>
tenseless		general (scope)	→ simultaneous-neutral-habitual	rarely: <i>Neg. Old Anterior</i> (?) <b><i>Neg. Anterior</i></b> <b><i>Neg. Anterior Passive</i></b>
simultaneous			– (Bounded Event Constraint)	rarely: <i>Neg. Anterior</i>
<b>simultaneous</b>	neutral	general (scope)	<b><i>Imperfective</i></b>	→ tenseless/simultaneous-perfective rarely: <i>Neg. Imperfective</i>
		habitual (quantity)		
simultaneous	<b>progressive</b>		<i>Periphrastic Imperfective</i>	rarely: <i>Neg. Periphrastic Imperfective</i>

**Table 7: Standard negation in Earlier Egyptian**

57 a) fn.56; b) fn.55; c) fn.52; d) fn.55; e) fn.44, 47; f) fn.48; g) fn.49; h) Satzinger (1968: §39-41); Malaise & Winand (1999: §682); k) Allen (2000: ch.17.15); m) Allen (2000: ch.21.5); Malaise & Winand (1999: §680); o) Allen (2000: ch.15.8)

For a typological classification of standard negation in Classic Middle Egyptian, the picture has to be simplified by grouping single-event, anterior propositions on the one side and simultaneous or tenseless propositions on the other side, and by leaving rare uses out:

<i>tense/aspect; scope/quantity</i>	<i>affirmative</i>	<i>negated</i> (all perfective)
‘anterior:’ anterior- perfective or simultaneous- resultative; single event	<p><b>Anterior</b>  <i>ʒm.n=f zj</i> *)            seize.PFV\ANT=3M\SG man(\M.SG)            ‘he seized/has seized the man’</p> <p><b>Pseudoparticiple</b>  <i>jw=f pri.ø</i> *)            PTCL=3M\SG go_forth\STAT;RES(.3M\SG)            ‘he has gone/went forth’  <i>jw=f ʒm.ø</i> **)            PTCL=3M\SG seize\STAT;RES(.3M\SG)            ‘he has been/was seized’</p> <p><b>Anterior Passive</b>  <i>ʒm.w zj</i> **)            seize\PFV\ANT\PASS man(\M.SG)            ‘the man was/has been seized’</p>	<p><b>Neg. Old Anterior</b>  <i>nj ʒm=f zj</i>            NEG seize\PFV\ANT=3M\SG man(\M.SG)            ‘he didn’t seize/hasn’t seized the man’  <i>nj ʒm.tw=f</i>            NEG seize\PFV\ANT.PASS=3M\SG            ‘the man was not/hasn’t been seized’</p>
‘imperfective:’ tenseless or simultaneous; neutral, general, or habitual	<p><b>Imperfective</b>  <i>ʒmm=f zj</i>            seize\IMFV=3M\SG man(\M.SG)            ‘he seizes/is seizing the man’  <i>ʒmm.tw=f</i>            seize\IMFV.PASS=3M\SG            ‘he is being seized’</p>	<p><b>Neg. Anterior</b>  <i>nj ʒm.n=f zj</i>            NEG seize.PFV\ANT=3M\SG man(\M.SG)            ‘he doesn’t seize the man’  <i>nj ʒm.n.tw=f</i>            NEG seize.PFV\ANT.PASS=3M\SG            ‘he is not being seized’</p> <p><b>Neg. Anterior Passive</b>  <i>nj ʒm.w=f</i>            NEG seize\PFV\ANT\PASS=3M\SG            ‘he is not being seized’</p>

\*) Pseudoparticiple used with intransitive verbs of motion; Anterior used in other cases.

\*\*) Pseudoparticiple used with pronominal *patiens*; Anterior Passive used with nominal *patiens*.

**Table 8: Paradigmatic displacement asymmetry in Middle Egyptian (early 2<sup>nd</sup> millennium BCE)**

By doing so we find that there is a simple paradigmatic displacement asymmetry concerning the categories of tense and aspect. While affirmative propositions distinguish between neutral and perfective aspect, all negated propositions convey perfective aspect. This is cross-linguistically not as unusual as one might expect.<sup>58</sup> That anterior and ‘imperfective’ propositions could still be held apart is due to the availability of two perfective verb forms, an older and a younger Anterior, used for one of the two ‘tenses,’ respectively. So at least as far as grammatical forms are concerned, Classic Middle Egyptian standard negation is of Miestamo’s type A/CAT/TAM/DISPL.<sup>59</sup> This system developed, I argue, because the younger Anterior had not been chosen to replace the Old Anterior in negative propositions (– as it did in

58 Miestamo & Auwera (2007) show that there are not less languages in which a ‘perfective’ : ‘imperfective’ distinction is lost in negation in favor of ‘perfective’ aspect than in favor of ‘imperfective’.

59 Miestamo (2005: 127-128).

affirmative propositions with the exception of the high frequency verb *wn(=f)* ‘was’ –, but to replace an earlier way of negating first general, and later all kinds of ‘imperfective’ propositions.<sup>60</sup> The motivation for this might have been its markedness for perfective aspect, i.e. the wish to explicitly negate the process as a whole.

### 6.3 The *sdm.n(=f)* of quality lexemes

In case of the *sdm.n(=f)* of roots denoting qualities or bearing stative meaning, it has been found that this form conveys a seemingly ‘inchoative aspect’ meaning like ‘became perfect’ or ‘has become perfect’ (*nfr.n(=f)*).<sup>61</sup> A similar phenomenon can be observed with words/stems bearing static *Aktionsart* in particular forms in a few other languages. These grammatical forms have likewise been classified as Anteriors. And this phenomenon has been analyzed as being a reinterpretation of the words/stems as denoting dynamic *Aktionsart*, triggered by the Anterior that has developed from an earlier Resultative.<sup>62</sup> The phenomenon should therefore not be analyzed as a form exhibiting inchoative aspect ([<-]—>), but as an effect of a reanalysis of the stem/word as denoting an open scale accomplishment (<++++>—), triggered by particular verbal forms. I argue that the same explanation applies in the case of Egyptian.<sup>63</sup>

<i>nfr</i>	‘perfect’	(Adjective or Neutral Participle)	<—>
<i>nfr.ø</i>	‘being perfect’	(Pseudoparticle, stative)	<-{[—]}->
	‘having become perfect’	(Pseudoparticle, resultative)	<++++>[-{—}]-
<i>nfr.n(=f)</i>	‘became perfect’	(perfective Anterior)	[<++++>]-{—}-
<i>nj nfr.n(=f)</i>	‘does not become perfect’	<i>item</i>	[<++++>]

60 Along the same line of thought: Satzinger (1987: §11).  
 61 Vernus (1984: 171-184); Winand (2006: 207-212).  
 62 Bybee et al. (1994: 74-76). For the classification of the Turkish form not as Anterior, but as Perfective, see Dahl (1985: 157). Obviously this gram is a perfective Anterior as well.) Possible examples in other languages are quoted by Winand (2006: 205-207).  
 63 So does Vernus (1984: 173-184). Winand (2006: 205-212), on the other hand, argues that the *sdm.n(=f)* of quality roots selects the *initial phase of the accomplishment ‘becoming’* ([<+{++++}>—). Despite the fact that other scholars have described the phenomenon using the term ‘inchoative,’ what they meant, I understand, was either the phase where the ‘becoming’ turns into ‘being,’ i.e. the ‘inchoative’ of the state (++++[+<-]—>), or the *whole phase of ‘becoming’* ([<++++>]—). Compare Bybee et al. (1994) p. 75 with p. 76. Winand (2006: 205-207, 215) also claims that this and other forms, in certain syntactic environments (‘perfectif momentané’), have the effect of selecting the inchoative aspect not only with static but with *dynamic* atelic lexemes as well ([<-{~~~~}>—). Since the explanation given by Bybee et al. for the seemingly ‘inchoative aspect’ in connection with stative lexemes does not apply for dynamic verbs, I am reluctant to believe this interpretation. Also Hannig (1991: 284) rejects this idea. In their *Grammaire raisonnée*, Malaise & Winand still claim that these forms exhibit completive aspect (1999: 242, 349: <~~~~[~>]—). Clear examples that cannot be explained as exhibiting perfective aspect ([<~~~~>]—) still have to be found. It is of minor importance here, whether one chooses to believe that the Egyptians had two parts-of-speech stems, an adjective \**c3* / \**w~r* and a verb \**c3i* / \**w~r* in their mental lexicon, or whether they had only one of the two in their mental lexicon and generated the other one by certain derivation patterns. This questions has some consequences, though, for the out-of-verbs hypothesis of Egyptian ‘adjectives.’ On this topic compare: Uljas (2007a); Peust (2008).

Note that most scholars interpret the negated *nj nfr.n(=f)* as denoting a present state, rather than the denial of the possibility of its emergence.<sup>64</sup> This might be explained as an ‘archaic’ interpretation of an earlier meaning of the *sdm.n(=f)* of a Resultative (see below).<sup>65</sup>

(*nj nfr.n(=f)*) ‘(not) having become perfect’ (simultaneous Resultative) <++++>[-{—}]—[-

## 7 The predicative *sdm.n(=f)* as a Perfect gram

Bybee et al. claim that Anteriors cross-linguistically often develop out of Resultatives or Completives. The hypothesis that the predicative Anterior *sdm.n(=f)* has developed from an earlier Resultative is supported by the following arguments.

– Semantics. As described above, the *sdm.n(=f)* affects the *Aktionsart* of quality root in such a way that the root is reanalyzed as the open scale accomplishment, whose resulting state is the quality originally denoted by the root. The same effect has been found with other Anteriors that have developed out of Resultatives, but not with those that have developed out of Completives.<sup>66</sup>

– Morphology. Resultatives often consist of two elements, one of which being a past and/or passive participle, the other one being a form of the verbs ‘to have’ or ‘to be.’<sup>67</sup> With the morpheme *-n* we have an element in the Egyptian verbal form, which could easily be explained as baring a meaning like ‘to have.’ It might originally have been the preposition *n* ‘for (someone) / to (someone).’ The verbal stem *sdm.-* of the predicative *sdm.n(=f)*, I argue, should be identified as the Pseudoparticiple of the 3<sup>rd</sup> person singular.<sup>68</sup> Like a passive participle in IE Perfects, it can combine with ‘subjects’ in an ergative fashion to express a state the ‘subject’ is in, after having been affected by the process. The morphology of these stems match: *sdm.-, 3m.-, jr.-, rd.- ~ d.-, jj.- (~ jw.-)*.<sup>69</sup> This leads to the following hypothetical scenario of its development: *\*\*sdm.t(j) z.t n=ƒ* ‘(the) woman (is/being) heard (has/had/will) have he’ (resultative clause + ‘for X’) → *\*\*sdm.t(j) n=ƒ z.t* → *\*sdm.ø-n=ƒ z.t* → *sdm.n=ƒ z.t* ‘heard-having he (the) woman’ (Old Resultative) → ‘heard he (the) woman’ (Anterior). (Note that this claim refers to the predicative *sdm.n(=f)* only! The emergence of other forms of

64 Gardiner (1957: §144); Malaise & Winand (1999: 316); Loprieno (1995: 126). Uljas (2007b: 239, ex.21). Allen (2000: ch. 18.16) translates the same example as ‘it cannot become ...,’ though. Compare also the affirmative examples quoted by Peust (2008: 74).

65 For ‘state exists’ as a relict interpretation of (Old) Anteriors and Perfectives see Bybee et al. (1994: 77-79, 92-93).

66 Bybee et al. (1994: ch. 3.9).

67 Bybee et al. (1994: ch. 3.6, 3.7); Maslov (1988: 73-74).

68 Loprieno (1986: 31-32), on the other hand, suggests identifying this *n* as an element marking narrative forms and the stem as that of either the Imperfective or the Old Anterior. For the idea of old that the root is to be identified with a participle or with a *nomen actionis* of some kind see Schenkel (1990: ch. 3.5.3.2; 1975).

69 For the *sdm.n(=f)*: Schenkel (2005: 186 [*jj.i.n(=f)*]; 2006: 50; 2007: 213-215). For the Pseudoparticiple: Edel (1955/1964: §579 [*jj.i.ø ~ jw.i.ø*]); Schenkel (1994: 170 [Sg.3.m.: \*KvKK-]); Malaise & Winand (1999: §713 [*jw.i.ø*]); Loprieno (1995: 78 [\*KvKK-]).

the Suffix Conjugation has to be explained differently.<sup>70</sup> For the other forms with suffix *-n*, analogy might have played an important role.)

– Pragmatics. The pragmatic distribution of the Anterior *sdm.n* and the Pseudo-participle *sdm.ø* in the Egyptian Perfect pattern is very similar to the distribution of resultative-active grams (‘gemacht haben’) vs. resultative-passive grams (‘gemacht sein’) within the German Perfect pattern. In both cases the active-non-resultative meaning is normally expressed by the form with ‘to have’ (‘haben’ / *-n*), while the passive-resultative meaning is normally expressed by the form without ‘to have’ (‘sein’ / *-*). But with a subclass of intransitive verbs, basically intransitive verbs of motion, the ‘resultative-passive’ grams are used to express active-non-resultative meaning:

	<i>resultative-simultaneous-passive</i>	<i>resultative-simultaneous-active</i> → <i>perfective-anterior/past-active</i>
<i>transitive</i>	<i>prw qd.ø</i> Das Haus ist <u>gebaut</u> . (The house is built.)	( <i>fw</i> ) <u>qd.n</u> <i>zj prw</i> Der Mann <u>hat</u> das Haus <u>gebaut</u> . (The man has built the house.)
<i>transitive movements</i>	* <i>prw q.ø</i> Das Haus ist <u>betreten</u> . (The house is entered.)	( <i>fw</i> ) <u>q.n</u> <i>zj prw</i> Der Mann <u>hat</u> das Haus <u>betreten</u> . (The man has entered the house.)
<i>intransitive</i>	–	( <i>fw</i> ) <u>rmj.n</u> <i>zj</i> Der Mann <u>hat</u> <u>geweint</u> . (The man has cried.)
<i>intransitive movements</i>	–	<i>zj jwi.ø</i> Der Mann ist <u>gekommen</u> . (The man has come.)

**Table 9: Distribution of Resultative and Anterior grams in Egyptian and German**

The reason for this distribution is the original ‘ergative’ meaning of the verbal part of the form. Both the German Perfect Passive Participle and the Egyptian Pseudoparticiple exhibit passive meaning with transitive verbs but can then also be used with intransitive verbs exhibiting active meaning. The formation of a Resultative gram with ‘to have’ covers up the passive meaning of the verbal form, since it basically only describes the ‘possession’ of a state. But since de-passivization requires transitivity of the verbal frame, these types of Perfects are originally restricted to transitive verbs. On their way to an Anterior more and more subgroups of intransitive verbs are used in Perfects. Obviously in German and Classic Middle Egyptian intransitive verbs of motion are the last classes of verbs that are going to be used with the Perfect grams based on a form of ‘to have.’

So, the German ‘haben-Perfekt’ and the Egyptian predicative *sdm.n(=f)* obviously have comparable morphological patterns as well as a comparable pragmatic distribution. I take that as a hint that the out-of-resultative hypothesis of the Egyptian *sdm.n(=f)* is basically correct. As a result, from a German perspective, the label ‘simultaneous Perfect’ is very appropriate for this form. But the label Anterior must still be preferred in linguistic discussion.

70 For various theories see Schenkel (1975). The adjectival and ‘nominal’ (< nominalized adjectival) forms of the Suffix Conjugation might very well be connected to the participles.

## 8 Diachronic development of the Egyptian Perfect *sḏm.n(=f)*

It has been felt that, in Old Kingdom, the predicative *sḏm.n(=f)* exhibits pragmatic restrictions very much like the English Present Perfect ‘He has heard.’<sup>71</sup> I have not come across clear examples of resultative aspect, i.e. with the topic time being placed in the post-phase, though. But on the other hand, in some rare cases, *nj sḏm.n=f* exhibits not the Middle Egyptian tenseless/simultaneous meaning, but an anterior meaning (in the wider sense of the word): ‘He hasn’t done it.’<sup>72</sup> This might be taken as a hint, that in the Old Kingdom in some cases the *sḏm.n(=f)* indeed exhibits an earlier simultaneous-resultative meaning. Whether it can still be used with this meaning in the Middle Kingdom even within the framework described here is to be shown. One would have to find a clear example with the topic time being situated in the post-phase.

The distinction between a ‘Present Perfect’ meaning and an anterior meaning based on the relevance felt in the reference time frame alone is pointless, though, in a system without two anterior (in the wide sense of the word) forms available that the speaker could choose from. A speaker in the Old Kingdom might have had the choice to differentiate between ‘he made it’ (*jr i=f sj*: Old Anterior) and ‘he has made it’ (*(jw) jr i.n=f sj*: either Resultative, or Anterior with pragmatic restrictions). A speaker in the Middle Kingdom, on the other hand, certainly could not make that choice, since synchronically there was only one grammatical form available that was commonly used: the Pseudoparticipial Construction (*=f/-sw jw i.ø* in the case of intransitive verbs of motion and the Anterior *sḏm.n(=f)* in other cases, respectively). The same fact can also be taken as proof that both forms must at least be *also* able to convey perfective-anterior (or aspectually neutral anterior) meaning. Within a subsystem like that of anterior (in the wider sense of the word) forms, there must be at least one commonly used form that allows the speaker to speak about the process proper (= perfective or neutral aspect), rather than its resulting state (= resultative).

In spoken language, the next step from an anterior to an absolute tense was probably never reached by the Anterior *sḏm.n(=f)*. Its functional successor, the Late Egyptian Perfective *sḏm(=f)*, on the other hand, is to be classified as absolute tense. A relative tense usage as anterior has to be marked by *jw*. It seems that in the 1<sup>st</sup> millennium BCE the *sḏm.n(=f)* in the *Égyptien de tradition* is sometimes taken as an absolute tense as well. An indicator for it, I argue, is the use with the conjunction *m-ht* ‘after,’ which marks the relative tense usage as opposed to an absolute tense usage.<sup>73</sup> Another development is that the intransitive verbs of motion are getting to be used in the predicative *sḏm.n(=f)* form.<sup>74</sup>

71 Doret (1986: 97-98); Edel (1955/1964: §535). Compare also Allen (1991: 28, 30).

72 Edel (1955/1964: §542, 888); Satzinger (1968: §27).

73 Jansen-Winkel (1996: §503, 758); Engsheden (2003: 122-123).

74 Jansen-Winkel (1996: §497 [some might still be nominal], §513 [*ḥ<sup>c</sup>.n spr.n=f r ḥw.t-ntr*]); Engsheden (2003: 105-106 [without distinction between predicative and nominal forms]).

	Old Kingdom	Middle Kingdom	New Kingdom
<i>'Perfect'</i> < > { [ ] } resultativ-simultaneous < X> [ — ] Resultative telic-resultative ↓ reanalysis Anterior perfective-anterior [< >] { } ↓ reference time restricted to T <sub>0</sub> Perfective perfective-past [< >] { T <sub>0</sub> }	* <i>ʒm.ø</i> (p/a-oriented) * <i>pr̄i.ø</i> (a-oriented) * <i>ʒm.ø-n=f</i> ([p>]a-oriented)	<i>jw=f ʒm.ø</i> (p-oriented) <i>jw=f pr̄i.ø</i> (a-oriented)  <i>ʒm.n=f</i> <i>nj ʒm.n=f</i>	<i>jw=f ʒm.ø</i> (p-oriented) <i>jw=f pr̄i.ø</i> (a-oriented)  <i>ʒm.n=f</i> <i>nj ʒm.n=f</i>
			<i>(jw sdm=f)</i> <i>(jw bw-py=f sdm)</i>
			<i>jw=f hr sdm</i> <i>iw=f hr tm sdm</i> <i>sdm=f</i> <i>bw-py=f sdm</i>
Negated Imperfective function: perfective-tenseless [< >] perfective-habitual [< >] [< >] ... [< >] perfective-simultaneous/present { [< >] }	<i>nj ʒm=f</i> (Old Anterior) [and/or] <i>nj ʒmm=f</i> (Imperfective)]	<i>nj ʒm.n=f</i> (Anterior)	<i>(jw) bw sdm=f</i> (Perfective)

(‘a-oriented’: agent-oriented; ‘p-oriented’: patient-oriented)

**Table 10: History of ‘anterior’ grams in Egyptian of the 3<sup>rd</sup> and 2<sup>nd</sup> millennia BCE**

If this scenario is correct the predicative *sdm.n(=f)* has a history as shown in Table 10, spanning more than one millennium.

### 9 Tenseless *sdm.n(=f)* and so-called tenseless languages

Some scholars state that there are ‘tenseless’ forms and languages. But what does this mean?

Some only mean that these forms are not marked for *absolute* tense. In these cases the identification of the reference time given by the grams is a pragmatic interpretation of the listener. This is the case in Earlier Middle Egyptian. Reference time can either be identified with time of speech or with another time frame given in a superordinate clause.<sup>75</sup>

Some scholars even argue for the absence of relative *and* absolute tense in particular cases. How can that be? Location of states-of-affairs in time is surely an important feature of communication. Also, is simultaneity not a relation of tense? Carlotta Smith (2007) argued that even in tenseless languages reference time, i.e. relative tense, is a category that has to be taken into account. She showed that in those

75 Vernus (1984); Uljas (2007c).

languages called ‘tenseless,’ whenever tense is not contextually nor grammatically marked in the proposition itself, the aspect *implicates* a specific relative tense. In Chinese clauses for example, propositions marked for perfective aspect but not for tense are interpreted as anterior/past tense propositions. The motivation for this, she claimed, is the cognitively founded Bounded Event Constraint mentioned above. Propositions marked for progressive aspect but not for tense, on the other hand, are interpreted as simultaneous/present propositions. But the story goes even further. If a proposition is neither marked for tense *nor* aspect, the Aktionsart of the proposition implies an aspect, and this aspect on its part implies a relative tense. So in predications neither marked for aspect nor tense, telic or punctual predications are normally interpreted as perfective-anterior/past propositions, while atelic-durative predications are normally interpreted as progressive-simultaneous/present propositions. The system of implication goes as follows:

<i>Aktionsart</i>	$\Rightarrow$ <i>aspect</i>		
telic and/or punctual < X>, <X>, <>	$\Rightarrow$ telic-perfective and/or punctual-perfective [< X>], [<X>], [<>]		
atelic-durative < >	$\Rightarrow$ atelic-durative-progressive < ] [ >		
		<i>aspect</i>	$\Rightarrow$ <i>tense</i> (by Bounded Event Constraint)
		perfective [< >]	$\Rightarrow$ perfective-anterior/past [< >] { }
		progressive < ] [ >	$\Rightarrow$ progressive-simultaneous/present < { } ] >

Along the same line of thought, a combination of perfective aspect and present tense violating the Bounded Event Constraint triggers a future interpretation of a proposition in Russian. In German, Present Tense triggers a habitual, general-tenseless or future interpretation if the pragmatic situation excludes a present tense interpretation proper.

Looking at the use of the Imperfective *sḏm(=f)* in past contexts and the use of the *sḏm.n(=f)* in negations and in performative contexts, one might argue that simultaneous or anterior tense are just a result of pragmatic inference in Classic Middle Egyptian. This analysis would indeed nicely account for the anterior uses of the Imperfective *sḏm(=f)* and the non-anterior uses of the *sḏm.n(=f)*. As far as the *sḏm.n(=f)* is concerned, one could argue that the anterior tense implication of the perfective aspect triggered by the Bounded Event Constraint is blocked in negations and in the performative use. In negations, the kernel idea of the Bounded Event Constraint does not apply, as argued above. In the case of the performative use, the given pragmatic situation might prevent a (far) anterior interpretation. In the case of the Old Anterior *sḏm(=f)*, on the other hand, the anterior tense implication is obviously stronger as to the point that it is surely justified to claim that it is marked for anterior tense in itself. Note that in the case of the Posterior *sḏm(.w)(=f)* and Periphrastic Posterior (*=f/-sw*) *r sḏm* one cannot argue that the posterior tense is an implication of mellic aspect. Its topic time is surely not in the pre-phase, i.e. it is not mellic at all.

So basically, one can choose to claim that the Anterior *sdm.n=f*, as well as the Imperfective *sdm(=f)* and the Periphrastic Imperfective (*=f/-sw*) *hr sdm* are not marked for tense, but that anterior or simultaneous tense are nothing but implications in certain contexts. But a similar analysis would be less appropriate or even inappropriate in the case of the Old Anterior, the Posterior, and the Periphrastic Posterior.



So, I suggest to classify the Classic Middle Egyptian predicative *sdm.n(=f)* as a perfective Anterior (glossing abbreviation: ANT[ERIOR], or traditional but less specific: P[E]RF[ECT]).

<i>sdm.n=f</i>	[< >] { }	'he heard/had heard/will have heard'
<i>jw sdm.n=f</i>	[< >] {T <sub>0</sub> }	'he heard/(has heard)'
<i>dj.n(=j) n=k</i>	[<X{>}T <sub>0</sub> ] or even {[<X/T <sub>0</sub> >}]	'herewith, I give you'
<i>nj sdm.n=f</i>	[< >]	'he does/can not hear in general'
	[< >] [< >] ... [< >]	'he does not normally hear'
	{[< >]}	'while he can/could/does/did not listen'
<i>nfr.n=f</i>	[<++++>]—{—}—	'he became/had/will have become perfect'
<i>nj nfr.n=f</i>	[<++++>]	'he does/can not become perfect'

The grammatical form itself is very probably of the 'Perfect' type, originally based on a Resultative (Pseudoparticiple) plus a possessive element (preposition *n* 'for').

In the Old Kingdom the *sdm.n(=f)* – as opposed to the Old Anterior *sdm(=f)* that conveyed perfective-anterior meaning – might have still exhibited an earlier simultaneous-resultative meaning in some instances:<sup>76</sup>

<i>jr.n=f</i>	< X>[—{—}]—	'he has/had/will have done'
<i>nj jr.n=f</i>	item	'he has/had/will have not done'
<i>nfr.n=f</i>	<++++>[—{—}]—	'he has/had/will have become perfect'
<i>nj nfr.n=f</i>	item	'he has/had/will have not become perfect'.

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76 Of course, a critical reanalysis of the Old Kingdom usage on the basis of the framework proposed here is necessary.

## Bibliography

- Allen, James P. 1984. *The Inflection of the Verb in the Pyramid Texts*, Bibliotheca Aegyptia 2, Malibu: Undena.
- . 1991. Form, function, and meaning in the early Egyptian verb, in: *Lingua Aegyptia* 1, 1-32.
- . 2000. *Middle Egyptian. An Introduction to the Language and Culture of Hieroglyphs*, Cambridge: University Press.
- Anstey, Matthew. 2002. *Layers and Operators Revisited*, Working Paper in Functional Grammar 77, Amsterdam: Universiteit van Amsterdam (pdf: [http://home.hum.uva.nl/fg/working\\_papers/WPFG77.pdf](http://home.hum.uva.nl/fg/working_papers/WPFG77.pdf); August 2008).
- Bäuerle, Rainer. 1979. *Temporale Deixis, temporale Frage: Zum propositionalen Gehalt deklarativer und interrogativer Sätze*, Tübingen: Gunter Narr.
- Binnick, Robert J. 1991. *Time and the Verb. A Guide to Tense and Aspect*, Oxford: Blackwell.
- Bohnenmeyer, Jürgen. 2003. *Relative Tense vs. Aspect: The Case Reopened*, Handout zum Vortrag im Rahmen der Konferenz ‘Semantics of Under-Represented Languages in the Americas 2’, Vancouver, University of British Columbia, March 14–16, 2003 (pdf: <http://linguistics.buffalo.edu/people/faculty/bohenmeyer/sula2jb.pdf>; Aug. 2008).
- Boland, Annerieke. 2006. *Aspect, Tense and Modality: Theory, Typology, Acquisition*, PhD dissertation, 2 vols., Utrecht: Landelijke Onderzoekschool Taalwetenschap.
- Bybee, Joan L., Revere Perkins & William Pagliuca. 1994. *The Evolution of Grammar. Tense, Aspect, and Modality in the Languages of the World*, Chicago & London: University of Chicago Press.
- Cohen, David. 1984. *La phrase nominale et l'évolution du système verbal en sémitique. Études de syntaxe. historique*, Paris: Société linguistique de Paris.
- . 1989. *L'aspect verbal*, Paris: Presses Universitaires de France.
- Comrie, Bernard. 1976. *Aspect. An Introduction to the Study of Verbal Aspect and Related Problems*, Cambridge: Cambridge University Press.
- CT I-VII = De Buck, Adriaan. 1935-1961. *The Egyptian Coffin Texts I-VII*, 7 vols., Oriental Institute Publications 34, 49, 64, 67, 73, 81, 87, Chicago: The University of Chicago Press.
- Dahl, Östen. 1985. *Tense and Aspect Systems*, Oxford: Basil Blackwell.
- Dik, Simon Cornelis. 1997. *The Theory of Functional Grammar, I: The Structure of the Clause, II: Complex and Derivated Constructions*, 2 vols., Functional Grammar Series 20/21, Berlin & New York: Mouton de Gruyter.
- Doret, Éric. 1986. *The Narrative Verbal System of Old and Middle Egyptian*, Cahiers d'Orientalisme 12, Genève: Patrick Cramer.
- Edel, Elmar. 1955/1964. *Altägyptische Grammatik I-II*, Analecta Orientalia 34/39, Rom: Pontificium Institutum Biblicum.
- Englund, Gertie & Paul John Frandsen (ed.). 1986. *Crossroad. Chaos or the Beginning of a New Paradigm. Papers from the Conference on Egyptian Grammar. Helsingør 28-30 May 1986*, CNI Publications 1, København: Carsten Niebuhr Institute of Ancient Near Eastern Studies.
- Engsheden, Åke. 2003. *La reconstitution du verbe en égyptien de tradition 400-30 avant J.-C.*, Uppsala Studies in Egyptology 3, Uppsala: Dept. of Archaeology and Ancient History, Uppsala University.
- Eyre, Christopher John. 1989. Tense or Aspect in Middle Egyptian?, in: Sylvia Schoske (ed.). *Akten des vierten Internationalen Ägyptologen-Kongresses, München 1985*, vol. 3, SAK-Beihefte 3, Hamburg: Helmut Buske, 51-65.
- Gardiner, Sir Alan. 1957. *Egyptian Grammar. Being an Introduction to the Study of Hieroglyphs*, 3. rev. ed., London: Griffith Institute, Ashmolean Museum & Oxford: University Press.
- Gautier, Joseph Étienne & Gustave Jéquier. 1902. *Mémoire sur les fouilles de Licht*, Mémoires publiés par les Membres de l'Institut Français d'Archéologie Orientale du Caire 6, Kairo: Impr. de l'IFAO.
- González, Paz. 2003. *Aspects on Aspect: Theory and Applications of Grammatical Aspect in Spanish*, Dissertationsschrift, Utrecht: Landelijke Onderzoekschool Taalwetenschap.
- Hammamat* = Couyat, Jules & Pierre Montet, *Les inscriptions hiéroglyphiques et hiératiques du Ouâdi Hammâmât*, Mémoires publiés par les Membres de l'Institut Français d'Archéologie Orientale du Caire 34, Cairo 1913: Impr. de l'IFAO.
- Hannig, Rainer H.G. 1982. Zum mittellägyptischen Tempussystem, in: *Göttinger Miscellen* 56, 35-52.

- . 1984. Die neue Gunnsche Regel, in: Friedrich Junge (ed.). *Studien zu Sprache und Religion Ägyptens zu Ehren von Wolfhart Westendorf, Band 1: Sprache*, Göttingen: Seminar für Ägyptologie, 63-70.
- . 1986. Der Kernbereich des Mittelägyptischen Verbalsystems: I. Die Infinitivtempora, in: *Journal of Ancient Civilizations* [Changchun] 1, 21-125.
- . 1987. Modelle zum mittelägyptischen Tempussystem. Ein Überblick: 1928-1982, in: *Journal of Ancient Civilizations* [Changchun] 2, 1-46.
- . 1991. *Pseudopartizip und sdm.n=f. Der Kernbereich des mittelägyptischen Verbalsystems II*, Hildesheimer Ägyptologische Beiträge 32, Hildesheim: Gerstenberg.
- Heger, Klaus. 1963. *Die Bezeichnung temporal-deiktischer Begriffskategorien im französischen und spanischen Konjugationssystem*, Beihefte zur Zeitschrift für romanische Philologie 104, Tübingen: Max Niemeyer.
- Jansen-Winkel, Karl. 1996. *Spätmittelägyptische Grammatik der Texte der 3. Zwischenzeit, Ägypten und Altes Testament* 34, Wiesbaden: Otto Harrassowitz.
- Junge, Friedrich. 1970. *Studien zum mittelägyptischen Verbum*, Dissertation zur Erlangung des Doktorgrades der Philosophischen Fakultät der Georg-August-Universität Göttingen, Göttingen.
- Kammerzell, Frank. 1988. Norm, Relikt oder Fiktion? Zweifel an der Existenz eines morphologisch-syntaktischen Kategorie 'indikativ-perfektives *sdm.f*' im M[ittel]äg[yptischen], in: *Göttinger Miscellen* 102, 41-57.
- Klein, Wolfgang. 1994. *Time in Language*, London & New York: Routledge.
- Kortmann, Bernd. 1991. The Triad 'Tense – Aspect – Aktionsart': Problems and Possible Solutions, in: Carl Vetters & Willy Vandeweghe. *Perspectives on Aspect and Aktionsart*, Belgian Journal of Linguistics 6, Bruxelles: Université de Bruxelles, 9-27.
- The Leipzig Glossing Rules: Conventions for Interlinear Morpheme-by-Morpheme Glosses*, ed. by the Department of Linguistics of the Max Planck Institute for Evolutionary Anthropology (Bernard Comrie, Martin Haspelmath) and by the Department of Linguistics of the University of Leipzig (Balthasar Bickel), <http://www.eva.mpg.de/lingua/resources/glossing-rules.php>, Leipzig, 12. Sept. 2008 (download: October 2008).
- Loprieno, Antonio. 1986. *Das Verbalsystem in Ägyptischen und im Semitischen. Zur Grundlegung einer Aspekttheorie*, Göttinger Orientforschungen, Reihe IV, 17, Wiesbaden: Otto Harrassowitz.
- . 1995. *Ancient Egyptian. A Linguistic Introduction*, Cambridge, Cambridge University Press.
- Malaise, Michael & Jean Winand. 1999. *Grammaire raisonnée de l'égyptien classique*, Aegyptiaca Leodiensia 6, Liège: Centre informatique de philosophie et lettres.
- Maslov, Jurij S. 1988. Resultative, Perfect, and Aspect, in: Nedjalkov & Comrie (1988), 63-85.
- Miestamo, Matti. 2005. *Standard Negation: The Negation of Declarative Verbal Main Clauses in a Typological Perspective*, Empirical Approaches to Language Typology 31, Berlin & New York: Mouton de Gruyter.
- Miestamo, Matti & Johan van der Auwera. 2007. Negation and Perfective vs. Imperfective Aspect, in: Walter De Mulder et al. (ed.), *[Proceedings of the Seventh Chronos Conference]*, Antwerp, September 2006, Cahiers Chronos, Amsterdam [in press]: Rodopi. (pdf of revised version, November 2007, [http://www.ling.helsinki.fi/~matmies/Miestamo&vanderAuwera\\_web.pdf](http://www.ling.helsinki.fi/~matmies/Miestamo&vanderAuwera_web.pdf), download: August 2008).
- Mugler, Alfred. 1988. *Tempus und Aspekt als Zeitbeziehungen*, Studien zur theoretischen Linguistik 9, München: Wilhelm Fink.
- Nedjalkov, Vladimir P. 2001. Resultative Constructions, in: Martin Haspelmath et al. (ed.). *Language Typology and Language Universals. An International Handbook*, Handbücher zur Sprach- und Kommunikationswissenschaft 20, Berlin & New York: Walter de Gruyter, 928-941.
- Nedjalkov, Vladimir P. & Bernard Comrie (ed.). 1988. *The Typology of Resultative Constructions*, Typological Studies in Language 12, Amsterdam & Philadelphia: John Benjamins.
- Nedjalkov, Vladimir P. & Sergej Je Jaxontov. 1988. The Typology of Resultative Constructions, in: Nedjalkov & Comrie (1988), 3-62.
- Olsen, Mari Broman. 1997. *A Semantic and Pragmatic Model of Lexical and Grammatical Aspect*, Outstanding Dissertations in Linguistics, New York & London: Garland.
- Peust, Carsten. 2008. Adjektiv und Adjektivverb im Mittelägyptischen, in: Carsten Peust (ed.). *Miscellanea in honorem Wolfhart Westendorf*, Göttinger Miscellen – Beihefte 3, Göttingen: Seminar für Ägyptologie und Koptologie der Universität Göttingen, 58-82.

- Pyr. = Kurt Sethe, *Die altägyptischen Pyramidentexte nach den Papierabdrücken und Photographien des Berliner Museums I-IV*, Leipzig 1908-1922: J.C. Hinrichs. (cited by paragraphs)
- Reichenbach, Hans. 1947. *Elements of Symbolic Logic*, New York & London: Macmillan (reprint New York 1980: Dover).
- Ritter, Thomas. 1995. *Das Verbalsystem der königlichen und privaten Inschriften. XVIII. Dynastie bis einschließlich Amenophis III.*, Göttinger Orientforschungen, IV. Reihe: Ägypten 30, Wiesbaden: Otto Harrassowitz.
- Satzinger, Helmut. 1968. *Die negativen Konstruktionen im Alt- und Mittelägyptischen*, Münchner Ägyptologische Studien 12, Berlin: Bruno Hessling.
- . 1987. Towards Reconstructing the Tense System of Old Egyptian, in: John D. Ray (ed.). *Lingua Sapientissima*, Cambridge: Faculty of Oriental Studies, 72-79.
- Schenkel, Wolfgang. 1975. *Die altägyptische Suffixkonjugation. Theorie der innerägyptischen Entstehung aus Nomina actionis*, Ägyptologische Abhandlungen 32, Wiesbaden: Otto Harrassowitz.
- . 1990. *Einführung in die altägyptische Sprachwissenschaft*, Darmstadt: Wissenschaftliche Buchgesellschaft.
- . 1994. *šm.t*-Perfekt und *šm.t*-Stativ: Die beiden Pseudopartizipien des Ägyptischen nach dem Zeugnis der Sargtexte, in: Heike Behlmer (ed.). ... *Quaerentes scientiam. Festgabe für Wolfhart Westendorf zu seinem 70. Geburtstag*, Göttingen: Seminar für Ägyptologie und Koptologie, 157-182.
- . 2002. Zur Formenbildung des prädikativen *šm=f* der Verben II.gem., vornehmlich nach dem Zeugnis der Sargtexte, in: *Göttinger Miscellen* 189, 89-98.
- . 2005. *Tübinger Einführung in die klassisch-ägyptische Sprache und Schrift*, [6. rev. ed.], Tübingen: [W. Schenkel].
- . 2006. Prädikatives und abstrakt-relativisches *šm.n=f*. Beobachtungen an den Verben II.gem. und ult. *n* im Korpus der Sargtexte, in: Gideon Goldenberg & Ariel Shisha-Halevy (ed.). *Egyptian, Semitic and General Grammar. Workshop in Memory of H.J. Polotsky (8-12 July 2001)*, Jerusalem: Israel Academy of Sciences and Humanities, 40-60. (Extract of the author.)
- . 2007. Zur Formenbildung des Perfekts *šm=f/rč=f* der Verben II.gem., vornehmlich nach dem Zeugnis der Sargtexte, in: *Lingua Aegyptia* 15, 203-216.
- Sh.S. = Blackman, Aylward Manley. 1932. *Middle-Egyptian Stories*, Bibliotheca Aegyptiaca 2, Brüssel: Fondation Égyptologique Reine Élisabeth, 41-48 (Shipwrecked Sailor).
- Smith, Carlota S. 2007. Reference Time without Tense, in: Louis De Saussure et al. (ed.). *Recent Advances in the Syntax and Semantics of Tense, Aspect and Modality*, Trends In Linguistics. Studies And Monographs 185, Berlin & New York: Mouton De Gruyter, 229-250.
- Stauder-Porchet, Julie. 2007. Review of Winand (2006), in: *Lingua Aegyptia* 15, 349-357.
- Uljas, Sami. 2007a. The Earlier Egyptian Adjective Reconsidered, in: *Lingua Aegyptia* 15, 231-250.
- . 2007b. Review of Winand (2006), in: *PalArch's Journal of Archaeology of Egypt/Egyptology* (January 2007), 6 pages (pdf from: <http://www.palarch.nl>, August 2008).
- . 2007c. Why (not) leave it 'virtual'? More on Grammar and Texture in Earlier Egyptian, in: *Lingua Aegyptia* 15, 251-262.
- Vernus, Pascal. 1984. Études de philologie et de linguistique (III), in: *Revue d'Égyptologie* 35, 159-188.
- . 1986. Aspect and Morphosyntactic Patterns in Middle Egyptian, in: Englund & Frandsen (1986), 375-388.
- . 1990. *Future at Issue. Tense, Mood and Aspect in Middle Egyptian: Studies in Syntax and Semantics*, Yale Egyptological Studies 4, New Haven (Connecticut): Egyptological Seminar, Yale University.
- Vet, Co. 2007. The Descriptive Inadequacy of Reichenbach's Tense System: A New Proposal, in: Louis De Saussure et al. (ed.), *Tense, Mood and Aspect. Theoretical and Descriptive Issues*, Cahiers Chronos 17, Amsterdam & New York: Rodolpi, 7-26.
- Winand, Jean. 2006. *Temps et aspect en égyptien. Une approche sémantique*, Probleme der Ägyptologie 15, Leiden, Boston & Köln: Brill.